Integrated Software Operation Manual (Video Mixer Function)

Contents

Description in this Manual

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Terms Used in this Manual

Definitions of terminology used in this manual are provided below.

- **AI Keying**

  AI Keying is a function that uses AI to isolate an element of a video from its background.
  With the help of this function, the chroma key effect can be easily achieved without the need for a green screen or special lighting.
  However, since AI processing uses background subtraction, the following limitations are applicable.
  - The camera position (angle of view) needs to be fixed.
  - A background image (AI Keying Background image) without the subject needs to be taken in advance.

- **AI Keying Background image**

  The AI Keying Background image is a background image without the subject, and is necessary for the AI Keying processing.
  When using AI Keying, it is necessary to take an AI Keying Background image with the camera position (angle of view) fixed.

- **AI Effect Filter**

  AI Effect Filter is a function that uses AI to detect people's faces in the video and apply an effect to it.

・AI Face Crop

AI Face Crop is a function that uses AI to detect people's faces in the video and then display them cropped out (Crop display) in real time from the rest of the video.

・AI Layer

This is an umbrella term for all of the layers upon which AI processing is performed (AI Keying, AI Effect Filter, and AI Face Crop).

・CUT

It refers to the process of instantaneously switching over to another video.

・DSK

It is the abbreviation for Downstream Key and refers to the process of superimposing characters, etc. in the final stage of the output video.

・Luminance Key

It refers to the process of making areas of the video at a specific luminance transparent.

・MIX

It is a special effect for switching over to another video and refers to the process of gradually switching from the previous video to the next one.

・PGM

It is the abbreviation for Program OUT and refers to the video output for distribution.

・PinP

It is the abbreviation for Picture in Picture and refers to the process of superimposing a video on top of another video.

・PVW

It is the abbreviation for Preview and refers to the preview video.

・Scene

It refers to a composite video (in which multiple layers are superimposed) created with this function.

・WIPE

It is a special effect for switching over to another video and refers to the process in which a scene is pushed to a specified direction and off the screen to be replaced by another scene.

・ Transition

It refers to a special effect for switching over to another video.

・ Input source image

It refers to an image input from the camera using any of the interfaces from SDI, NDI®, or SRT.

- **Movie file**

  It refers to a movie file in the MOV or MP4 format that is saved on the PC.

- **Still image file**

  It refers to a still image file in the PNG, JPEG, or BMP format that is saved on the PC.

- Internal SG / INTSG

  An abbreviation for Internal signal generator, which refers to an internally generated signal.
  Generates SMPTE color bars as a video signal and a 1KHz test tone as an audio signal.

About the Video Mixer Function

Function Overview

The Video Mixer function offers a function that uses AI to isolate an element of a video from its background and composite it onto another video. It also offers an easy-to-operate switching function that enables you to switch between videos and choose a video to output.

Main features

- AI-based easy chroma key effect (AI Keying function)
  - The subject can be isolated without the need for a green screen or special lighting.
  - The operation is simple and does not require highly skilled technicians.
  - It can also be used outdoors.
- AI-based face detection function that is capable of real time effect application (AI Effect Filter function) and face cropping (AI Face Crop function)
  - You can apply effects to the faces of up to 25 people simultaneously (AI Effect Filter function)
  - Up to eight face images registered beforehand can be recognized, and you can choose to apply or not to apply effects to these images (AI Effect Filter function)
  - You can adjust the size and composition of detected faces and crop them as you like (AI Face Crop function)
- Support for a plurality of video interfaces
  - Supports SDI, SRT, NDI®
- Video compositing and switching functions
  - Up to four layers can be composited.
  - Videos can be switched by simply clicking the thumbnails.

Operational Requirements

The following requirements must be met to use this plugin.

■ PC

- OS *1

  Windows Server 2022

  Windows 11

- Hardware (Required)

  CPU: Intel Core i7 13th Generation or later

  Recommended models

  Core i7 13700/14700

  Core i9 13900/14900

  GPU: NVIDIA GPU with Ampere architecture or Ada Lovelace architecture or Blackwell architecture*2

  Recommended models (for desktop PCs)

  Ampere architecture

  GeForce RTX 3070, GeForce RTX 3070Ti

  GeForce RTX 3080, GeForce RTX 3080Ti

  GeForce RTX 3090, GeForce RTX 3090Ti

  Ada Lovelace architecture

  GeForce RTX 4070, GeForce RTX 4070 SUPER, GeForce RTX 4070Ti

  GeForce RTX 4080, GeForce RTX 4080 SUPER

  GeForce RTX 4090

  Blackwell architecture

  GeForce RTX 5070, GeForce RTX 5070 Ti, GeForce RTX 5080

  GeForce RTX 5090

  Recommended models (for laptop PCs)

  Ampere architecture

  GeForce RTX 3080, GeForce RTX 3080Ti

  Ada Lovelace architecture

  GeForce RTX 4080

  GeForce RTX 4090

  Blackwell architecture

  GeForce RTX 5070 Ti, GeForce RTX 5080, GeForce RTX 5090

  Memory: 16 GB or more

  Display: 1920 x 1080 or higher

  Storage: 16 GB or more free space

- Hardware (Optional)

  SDI I/F device: Blackmagic SDI I/F device *3, *4

  Confirmed to work on the following models:

DeckLink 8K Pro
DeckLink Duo 2
DeckLink Quad 2
UltraStudio Monitor 3G
UltraStudio Recorder 3G
UltraStudio HD Mini *5

・ Software

Web browser: Microsoft Edge, Google Chrome

<Notes>

*1: Ensure that you use this plugin with the Windows OS installed to the C drive of the PC.

*2: NVIDIA GPUs with Pascal architecture or Turing architecture are not supported.

*3: Required when video input/output is performed using the SDI interface.

*4: Use the device with only one connected. Operation is not guaranteed when multiple devices are connected.

*5: UltraStudio HD Mini can only connect one port, either input or output.

■ Client (Browse terminal)

・ OS

Windows 11
macOS 13 (Ventura) or later
iPadOS 16 or later

・ Hardware

Display: 1920 x 1080 or higher (on other than iPad)

・ Software

Web browser: Microsoft Edge, Google Chrome

Supported Interfaces

■ Input

●Video

・ Number of channels

Four channels maximum

・I/F

SDI * A Blackmagic SDI I/F device is required.

NDI® (NDI® High Bandwidth, NDI® HX1, NDI® HX2, NDI® HX3)

*Up to two inputs for NDI® HX1, NDI® HX2, NDI® HX3

*To use NDI® HX1, NDI® Tools must be installed on the PC on which this software is installed. Before using this software, download NDI® Tools from the Internet and install it.

SRT (H.264, H.265)

●Audio

・Ch. Number

Up to 2 channels. *It supports input of audio exceeding 2 channels, but due to the limitation of the number of output audio channels in VideoMixer, the maximum audio data that can be handled is 2 channels.

・I/F

SDI

NDI®（NDI® High Bandwidth, NDI® HX1, NDI® HX2, NDI® HX3）

SRT（H.264, H.265）

・Sampling rate

48kHz

■ Output

●Video

・ Number of channels

Two channels maximum

・I/F

SDI * A Blackmagic SDI I/F device is required.

NDI® (NDI® High Bandwidth)

SRT (H.264)

●Audio

・Ch. Number

Up to 2 channels.

・I/F

SDI

NDI®（NDI® High Bandwidth, NDI® HX1, NDI® HX2, NDI® HX3）

SRT（H.264, H.265）

PC audio output (LineOut)

- Sampling rate

  48kHz

Supported formats

The following formats can be used as the input source and system format for this software.

1080/59.94p
1080/59.94i(SDI output only)
1080/50p
1080/50i(SDI output only)
1080/29.97p
1080/25p
1080/24p
1080/23.98p
720/59.94p
720/50p

Supported file formats for movie and still images

Movie file

MOV, MP4 *Resolution: 3840x2160 or less

Still image file

PNG, JPEG, BMP *Resolution: 3840x2160 or less, Bit depth: 24bit or 32bit

Specifications of a Scene (Composite Video) and Switching Function

Specifications of a Scene (Composite Video)

- Number of layers that can be composited

  Maximum four layers + DSK

- Composite materials

  Input source (SDI, NDI®, SRT)

  Movie file (MOV, MP4) *Up to two

  Still image file (PNG, JPEG, BMP)

- Composite effects

  PinP

  AI Keying

  Luminance Key

  Color Filter

Specifications of the Switching Function

- Transition effect

  CUT

  MIX (Dissolve)

  WIPE (Four directions of Up, Down, Left, and Right)

Procedure for Using the Function

About the Procedure for Using the Function

This function is a paid plugin.
This function can be used at no charge for a 30-day free trial period, but if you wish to continue using the function after the trial period ends, a license (key code) must be purchased and activated.

The procedure for starting the free trial and activating the license is performed by the Information function of this software.
With the Information function, you can:

- Start the free trial of this function
- Activate/deactivate the license for this function
- Check the license status for this function

Starting the Free Trial

After you perform the procedure for starting the trial, the Video Mixer function is available at no charge for 30 days.
All functions can be used during the trial period, but output video images are watermarked with “Media Production Suite”.

For instructions on how to start a trial, please refer to "Manage Paid Plugins" → "Starting the Free Trial" in the Information Function Operating Manual.

*The PC must be connected to the Internet.
Approximately 2GB of data is to be downloaded, so it is recommended to perform the procedure in an environment with good connection status.

Activating the License

If you purchase a license and activate it, you can use the Video Mixer function indefinitely.
For activation procedures, refer to " Manage Paid Plugins " → "Activating the License" in the Information Function Operating Manual.

*The PC must be connected to the Internet.
Approximately 2GB of data is to be downloaded if free trial is not performed, so it is recommended to perform the procedure in an environment with good connection status.

Deactivating the License

If you wish to transfer a license to another PC, you must first deactivate the license on the PC on which the license is currently activated.
For deactivation procedures, refer to " Manage Paid Plugins " → "Deactivating the License" in the Information Function Operating Manual.

Checking the License Status

The license status can be checked on the Information function screen.
For the procedure, please refer to " Manage Paid Plugins " → " Checking the license status" in the Information Function Operating Manual.

Installation of the plugin data

If the license status is [In Trial] or [Activated] and the plugin data for this function is not installed on your PC, you will need to install the plugin data.
For instructions, please refer to "Manage Paid Plugins" -> "Installation of the plugin data" in the Information Function Operating Manual.

*The PC must be connected to the Internet.
Approximately 2 GB of data is to be downloaded, so it is recommended to perform the procedure in an environment with good connection status.

Update of the plugin data

If the license status is [In Trial] or [Activated] and new plugin data is available on the website, you can update the plugin data from the Information screen.
For instructions, refer to "Manage paid plugins" -> "Updating plugin data" in the Information function operating instructions.

*The PC must be connected to the Internet.
Approximately 2 GB of data is to be downloaded, so it is recommended to perform the procedure in an environment with good connection status.

PC Hardware Settings

About the PC Hardware Settings

Before using this function, make the following settings on the PC on which this software is installed.

- PC screen output settings
- PC sleep settings
- PC power plan settings (laptop PC only)
- Installation of NVIDIA GPU
- Installation and settings of Blackmagic SDI I/F device

PC Screen Output Settings

When using this function, it is recommended to perform the screen output of the PC on which this software is installed from the built-in graphics of the CPU. Connect the PC monitor to the video output terminal on the motherboard (do not connect to the video output terminal of the NVIDIA GPU).

<Notes>

- Although this function can still be used with the video output terminal of the NVIDIA GPU (or, if you use a CPU on which the built-in graphics function is not installed), performance may be low, causing dropped frames.
- Depending on the PC, the built-in graphics function of the CPU may be disabled in BIOS. If the PC screen is not displayed even after connecting the PC monitor to the video output terminal on the motherboard, enable the built-in graphics function of the CPU in the BIOS settings of the PC.

PC Sleep Settings

When using this function, please set the PC on which this software is installed not to go into sleep mode automatically. If the PC goes into sleep mode while using this function, this function may not work properly after waking up from sleep mode.

PC Power Plan Settings (laptop PC only)

If this software is installed on a laptop PC, it is recommended to change the power plan settings to “High performance”. If the setting is other than “High performance”, performance may be low, causing dropped frames.

Configure the settings according to the procedure below.

1. Open “Search” from the Start menu of Windows, and enter “Control Panel” in the search box.

2. Control Panel will be displayed in the search results. Click it to open the Control Panel.
3. Change the Control Panel display method to “Large icons”.
4. From the displayed items, click “Power Options”.
5. If “High performance” is displayed in the power plans under “Choose or customize a power plan”, select “High performance”.

   If “High performance” is not displayed in the power plans, take the following action:

   (1) Right-click the Windows icon on the Windows taskbar and select “Terminal (Administrator)” or “Command prompt (Administrator)”.

   (2) The terminal or command prompt screen opens. Run the following command:

   powercfg -setactive 8c5e7fda-e8bf-4a96-9a85-a6e23a8c635c

   (3) “High performance” will be displayed in the power plans, so select it.

Installation of NVIDIA GPU

When using this function, the NVIDIA GPU must be installed on the PC on which this software is installed.
Use the latest driver (Game Ready driver) that can be downloaded from the NVIDIA website as the driver of the NVIDIA GPU. If the driver is of an old version, this function may not work properly.
<Notes>

- For details on the recommended models of the NVIDIA GPU, refer to Operational Requirements in this document.

Installation and Settings of Blackmagic SDI I/F device

When using SDI as the input/output interface, the Blackmagic SDI I/F device must be installed on the PC on which this software is installed.
<Notes>

- For details on the models on which the SDI I/F device is confirmed to work, refer to Operational Requirements in this document.
- Even if multiple SDI I/F devices are connected, only a single device will be recognizable.

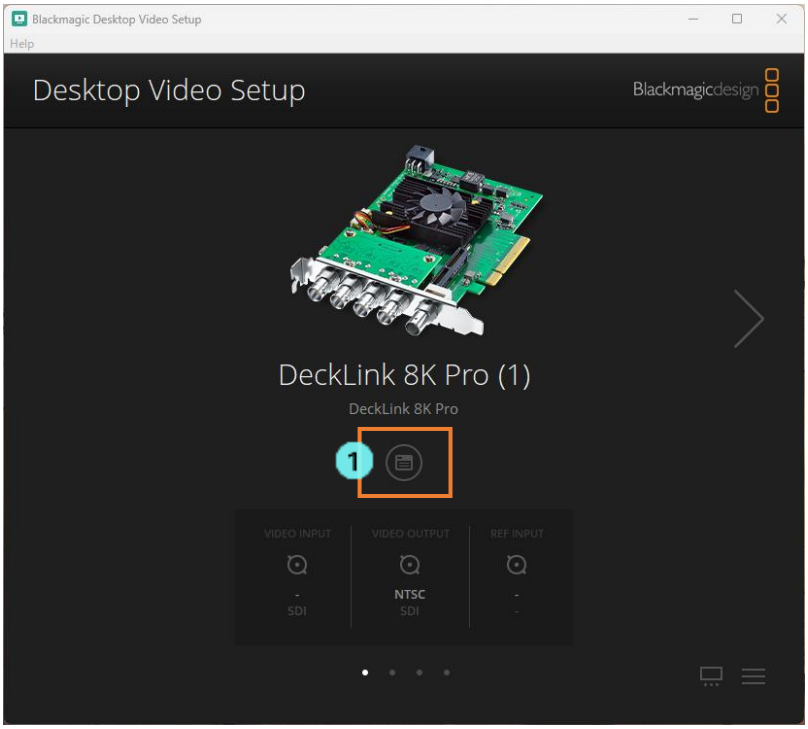
After installing the SDI I/F device on the PC, install the software for the SDI I/F device and configure the settings for the SDI I/F device according to the procedure below.

1. Download the latest Desktop Video software from the Blackmagic website.
   *Latest version as of March 2024: Blackmagic_Desktop_Video_Windows_12.8.1
2. Run the installer from the downloaded file, and install the Desktop Video software.
3. Restart the PC after the completion of installation of the Desktop Video software.
4. If the firmware of the SDI I/F device is of an old version, you will be prompted to update the firmware. Update the firmware.
5. If the firmware is updated in step 4., restart the PC.
6. From the Start menu of Windows, select [Blackmagic Design] -> [Blackmagic Desktop Video Setup] to start the

Blackmagic Desktop Video Setup software and make the following settings.

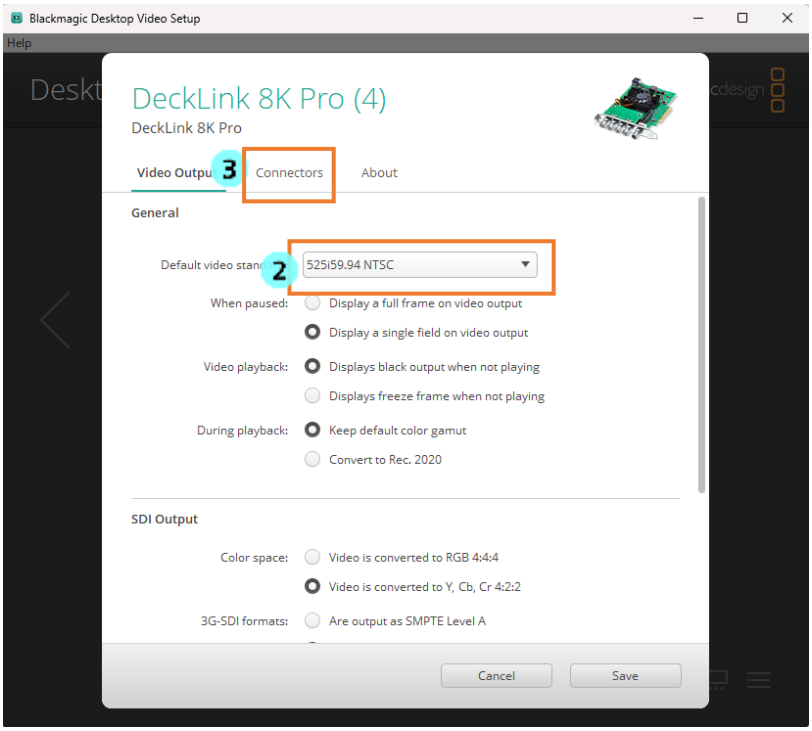
■ For DeckLink 8K Pro

6-1. Make sure that “DeckLink 8K Pro (1)” is selected, and then click the button indicated by the frame in the figure below.



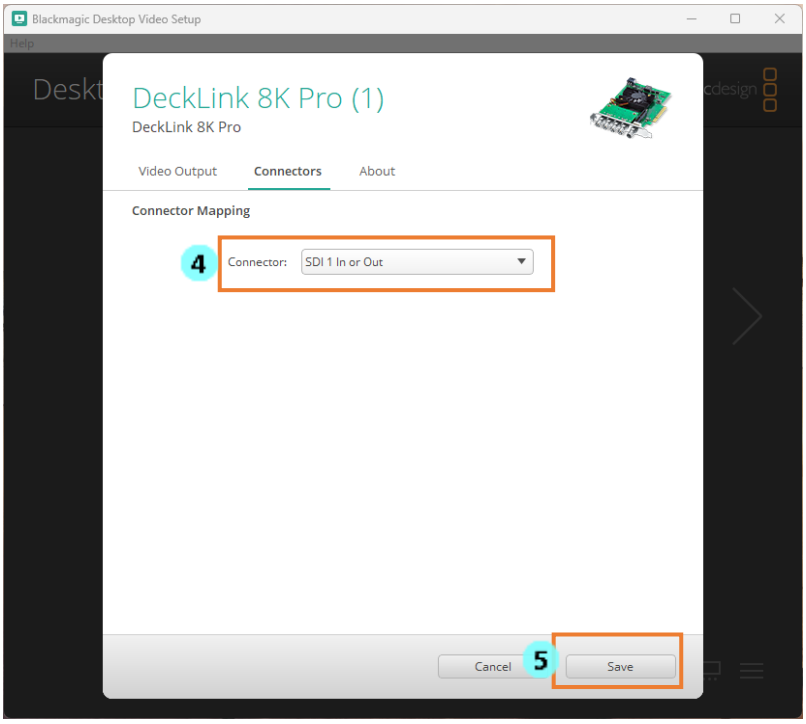
6-2. Set the default video format to [1080p59.94] or [1080p50].

6-3. Click the Connectors tab.



6-4. Set the Connection setting to [SDI 1 In or Out].

6-5. Click the Save button to close the screen.

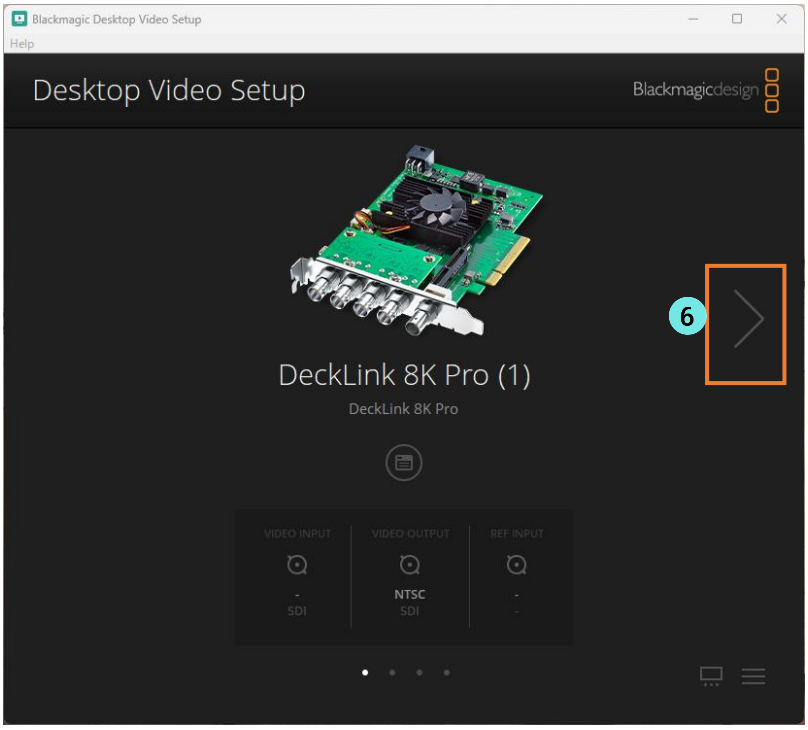


6-6. Use the right angle bracket button to change the setting target. Repeat step 6-1 to 6-5 and make the following settings for each of “DeckLink 8K Pro (2)” to “DeckLink 8K Pro (4)”.

DeckLink 8K Pro (2): [SDI 3 In or Out]

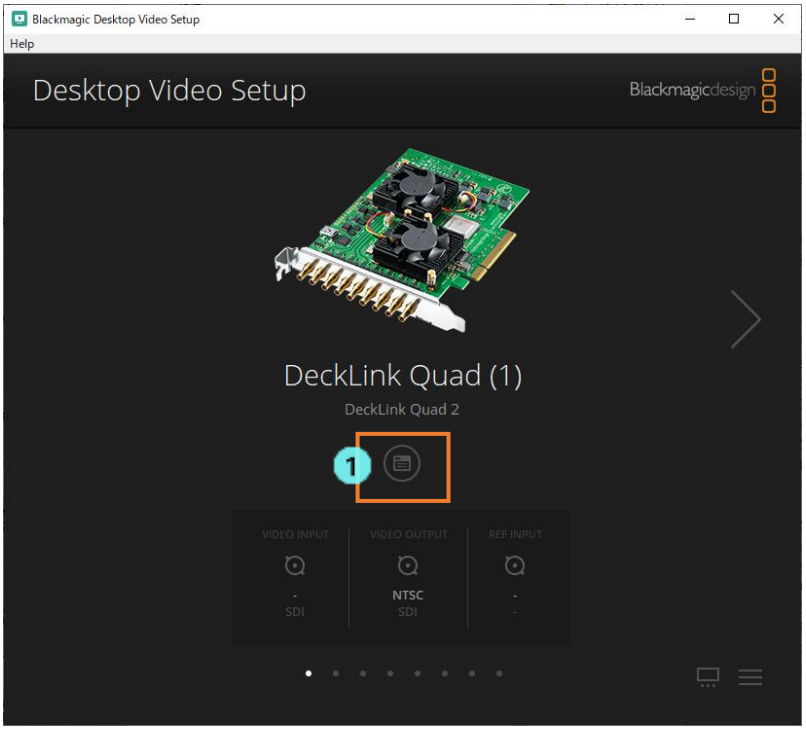
DeckLink 8K Pro (3): [SDI 2 In or Out]

DeckLink 8K Pro (4): [SDI 4 In or Out]



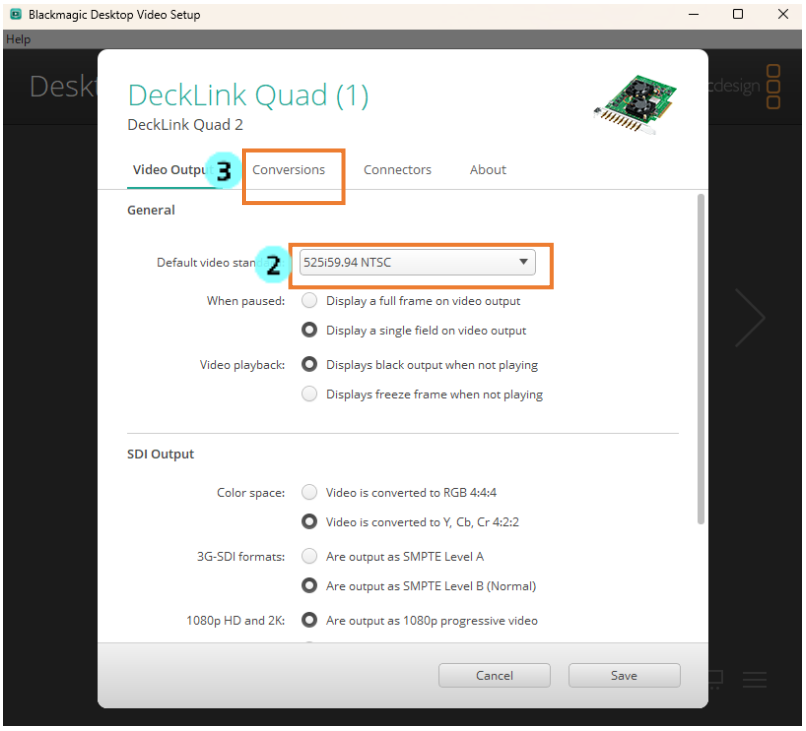
■ For DeckLink Quad 2

6-1. Make sure that “DeckLink Quad (1)” is selected, and then click the button indicated by the frame in the figure below.



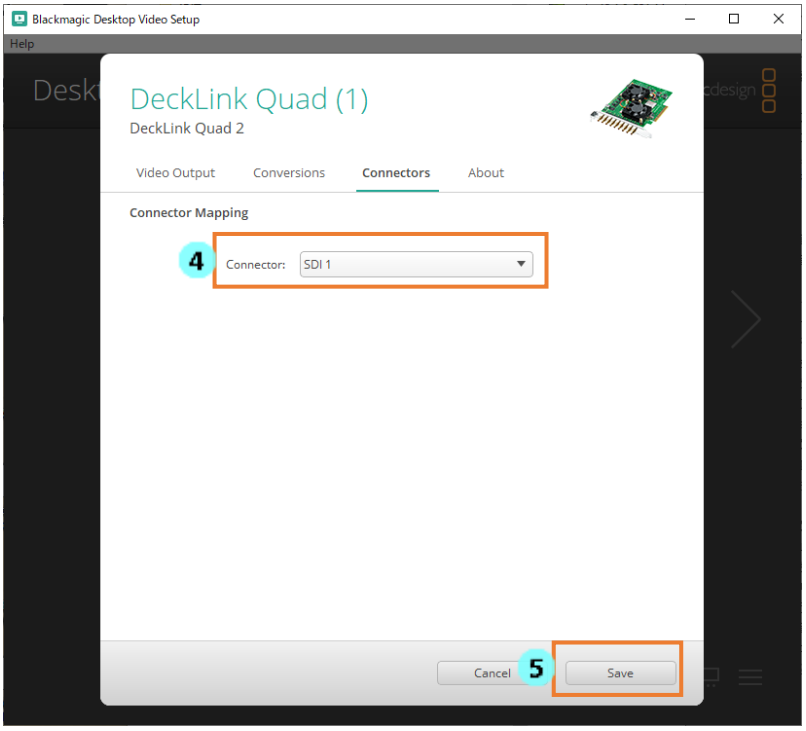
6-2. Set the default video format to [1080p59.94] or [1080p50].

6-3. Click the Connectors tab.



6-4. Set the Connection setting to [SDI 1].*Select HDMI if you are using an HDMI input.

6-5. Click the Save button to close the screen.



6-6. Use the right angle bracket button to change the setting target. Repeat step 6-1 to 6-5 and make the following settings for each of “DeckLink Quad (2)” to “DeckLink Quad (8)”.

DeckLink Quad (2): [SDI 3]

DeckLink Quad (3): [SDI 5]

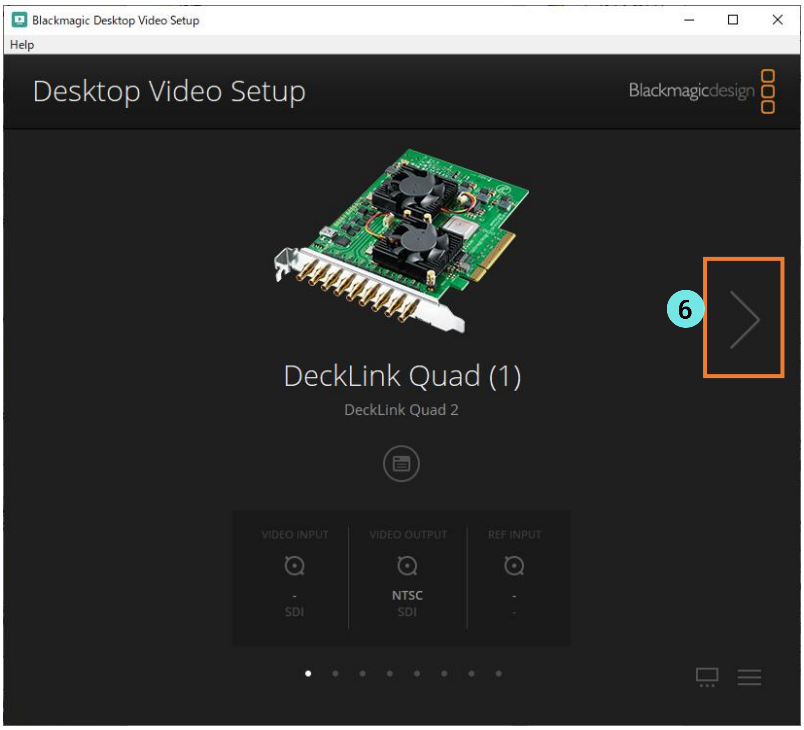
DeckLink Quad (4): [SDI 7]

DeckLink Quad (5): [SDI 2]

DeckLink Quad (6): [SDI 4]

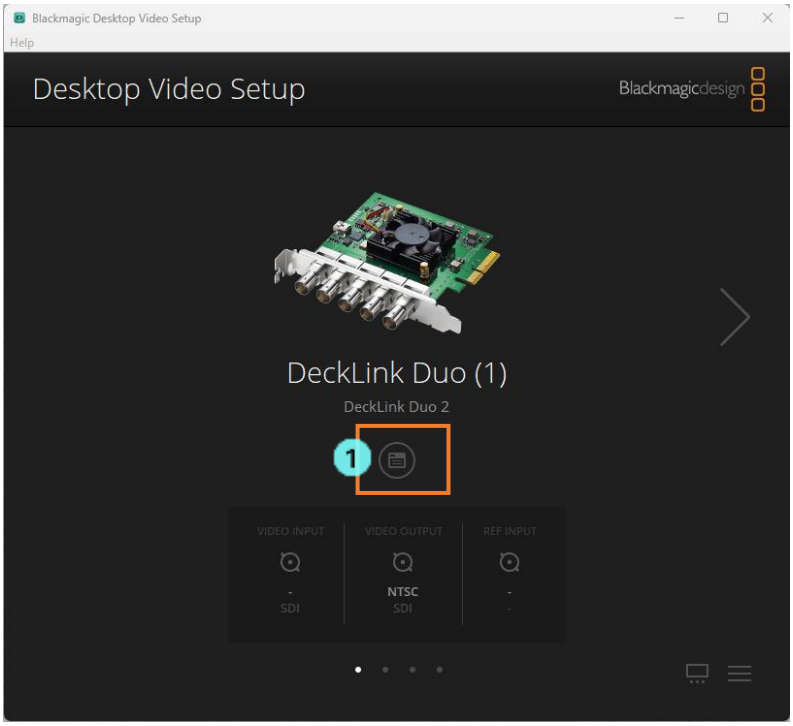
DeckLink Quad (7): [SDI 6]

DeckLink Quad (8): [SDI 8]



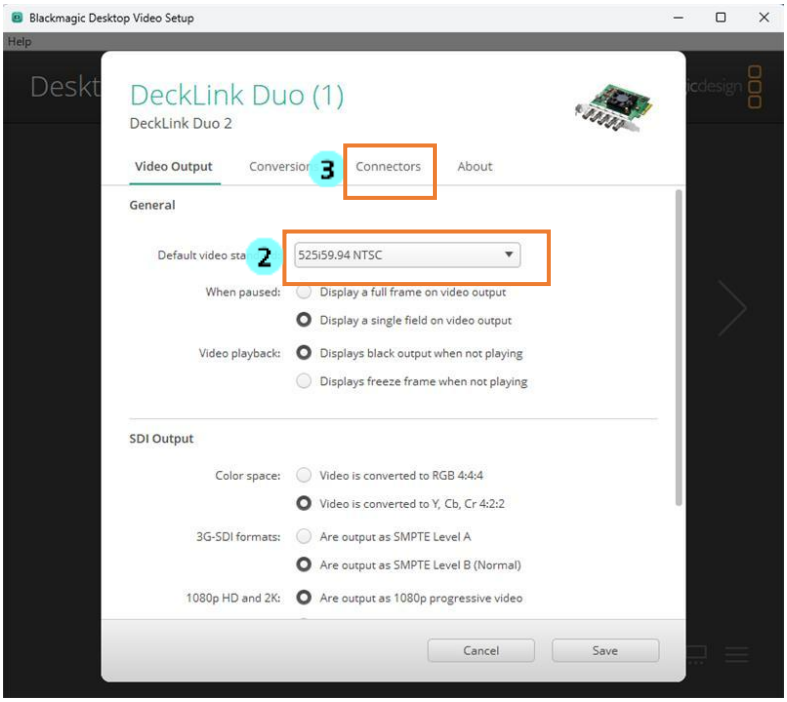
■ For DeckLink Duo 2

6-1. Make sure that “DeckLink Duo (1)” is selected, and then click the button indicated by the frame in the figure below.



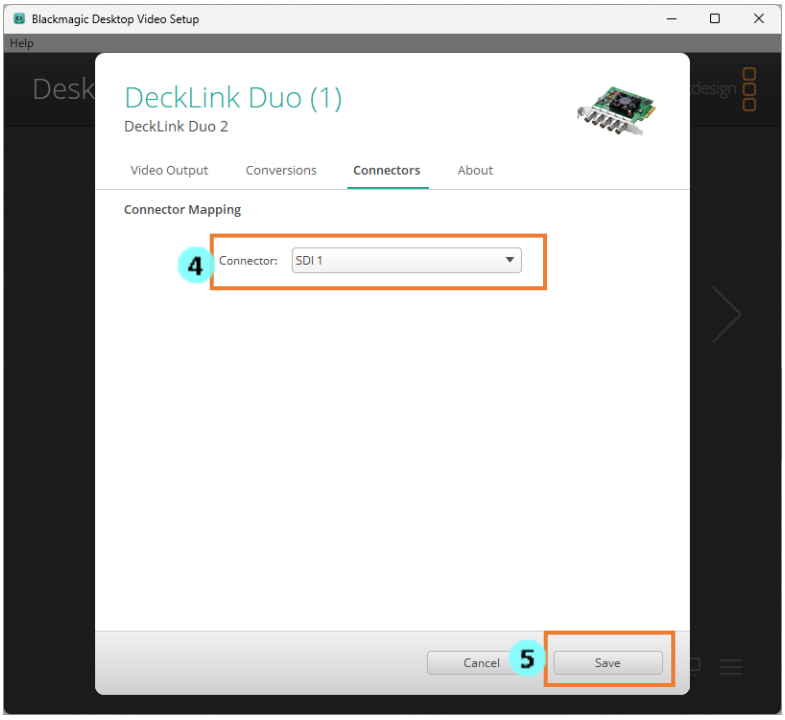
6-2. Set the default video format to [1080p59.94] or [1080p50].

6-3. Click the Connectors tab.



6-4. Set the Connection setting to [SDI 1].

6-5. Click the Save button to close the screen.

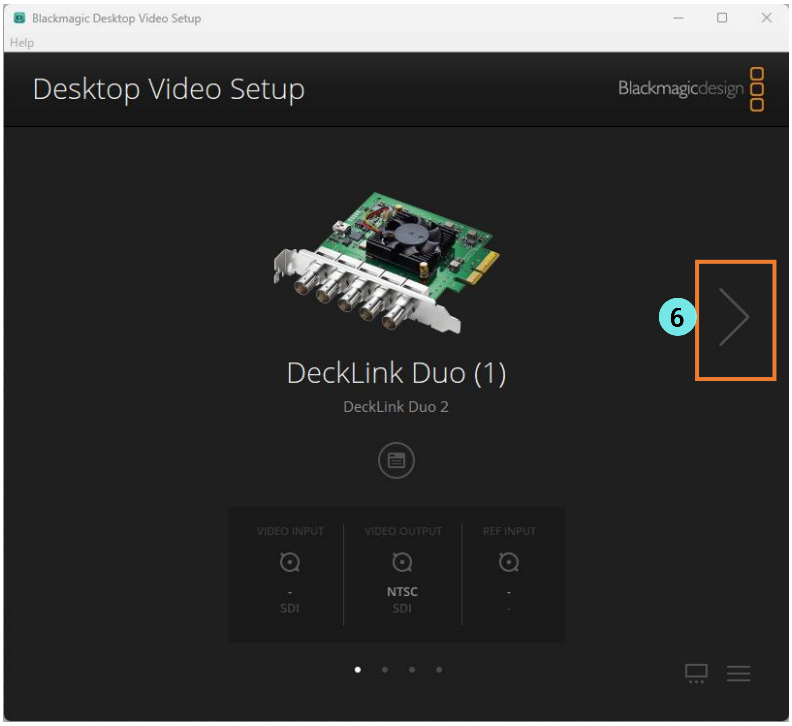


6-6. Use the right angle bracket button to change the setting target. Repeat step 6-1 to 6-5 and make the following settings for each of “DeckLink Duo (2)” to “DeckLink Duo (4)”.

DeckLink Duo (2): [SDI 3]

DeckLink Duo (3): [SDI 2]

DeckLink Duo (4): [SDI 4]

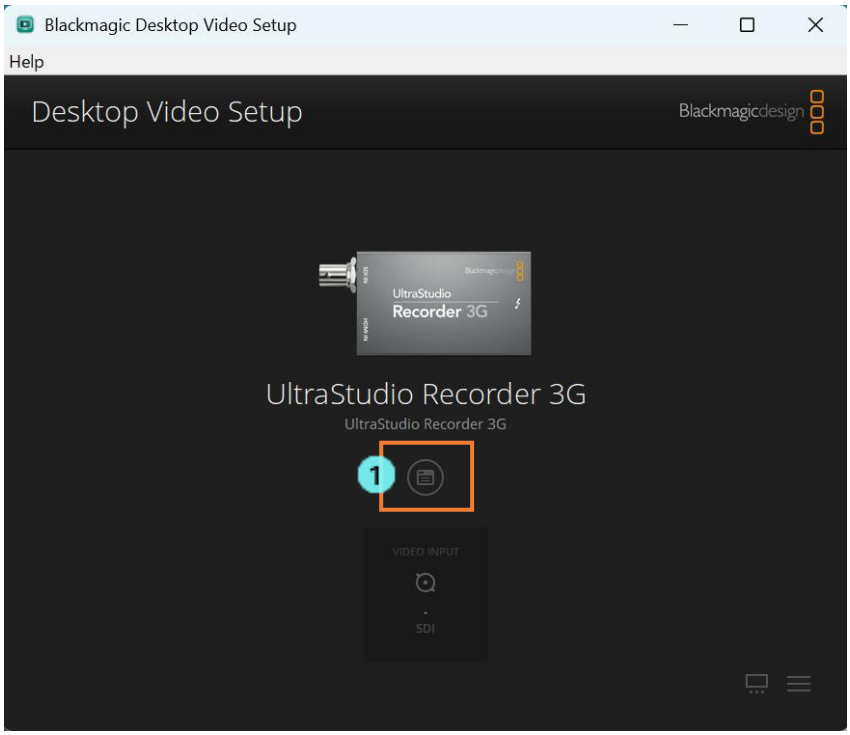


■ For UltraStudio Monitor 3G

No configuration is required.

■ For UltraStudio Recorder 3G

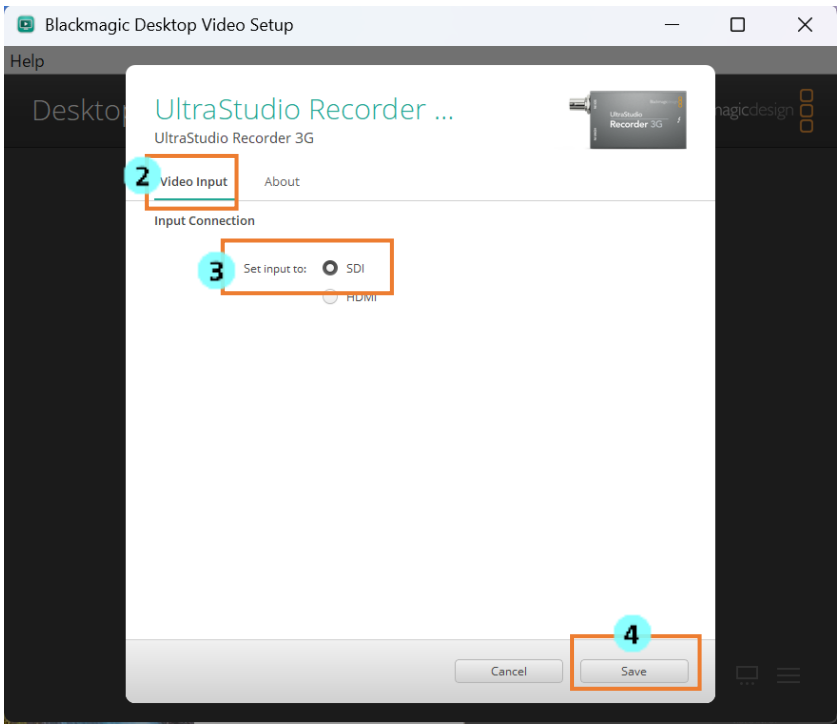
6-1. Make sure that “UltraStudio Recorder 3G” is selected, and then click the button indicated by the frame in the figure below.



6-2. Click the Video Input tab.

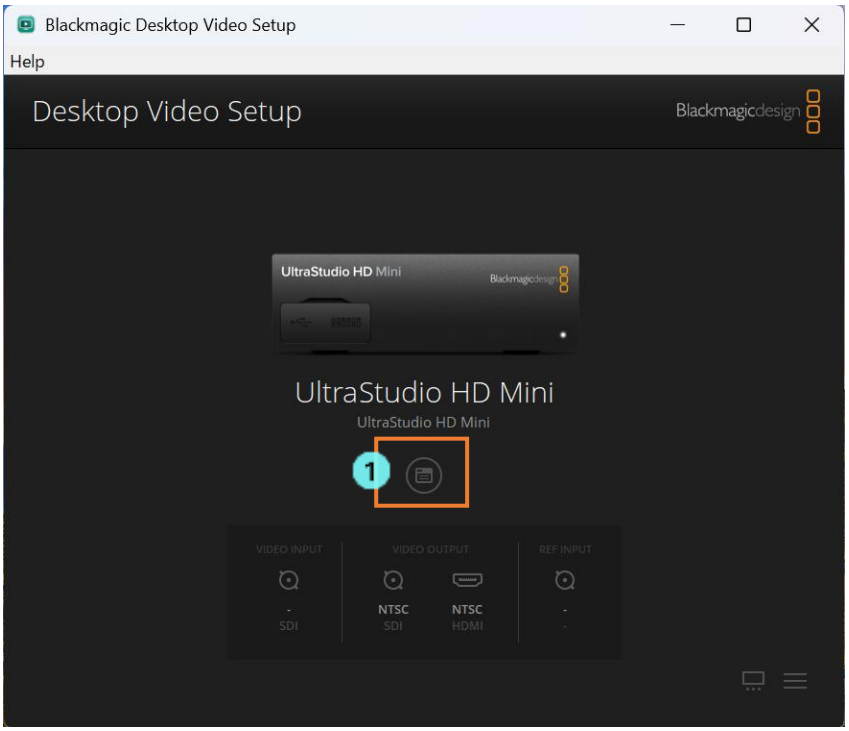
6-3. Set the Connection setting to [SDI].

6-4. Click the Save button to close the screen.



■ For UltraStudio HD Mini

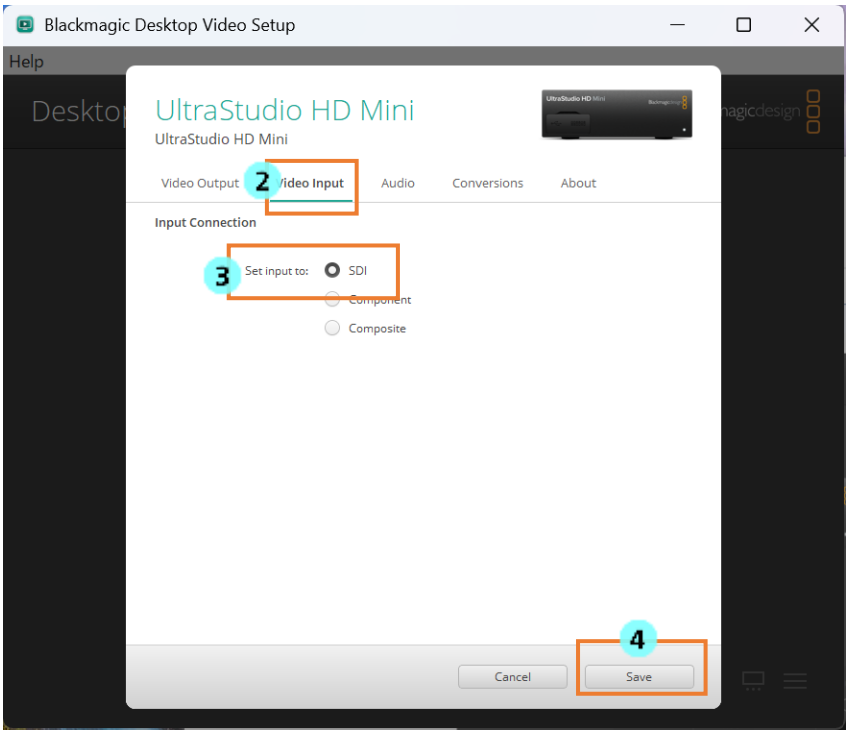
6-1. Make sure that “UltraStudio HD Mini” is selected, and then click the button indicated by the frame in the figure below.



6-2. Click the Video Input tab.

6-3. Set the Connection setting to [SDI].

6-4. Click the Save button to close the screen.



Screens

Screen Configuration

This function has five main screens.

- Multi View screen

  This is a screen that displays the input source video and created video materials such as the scenes side by side in a multi-view format, and is used to check the video and perform the switching operation.

- IO Setting screen

  This is a screen that is used to perform connection settings of the input source video and output video, and configure the settings for the system format.

- Media screen

  This is a screen that is used to perform management of the movie files and still image files used as video materials.

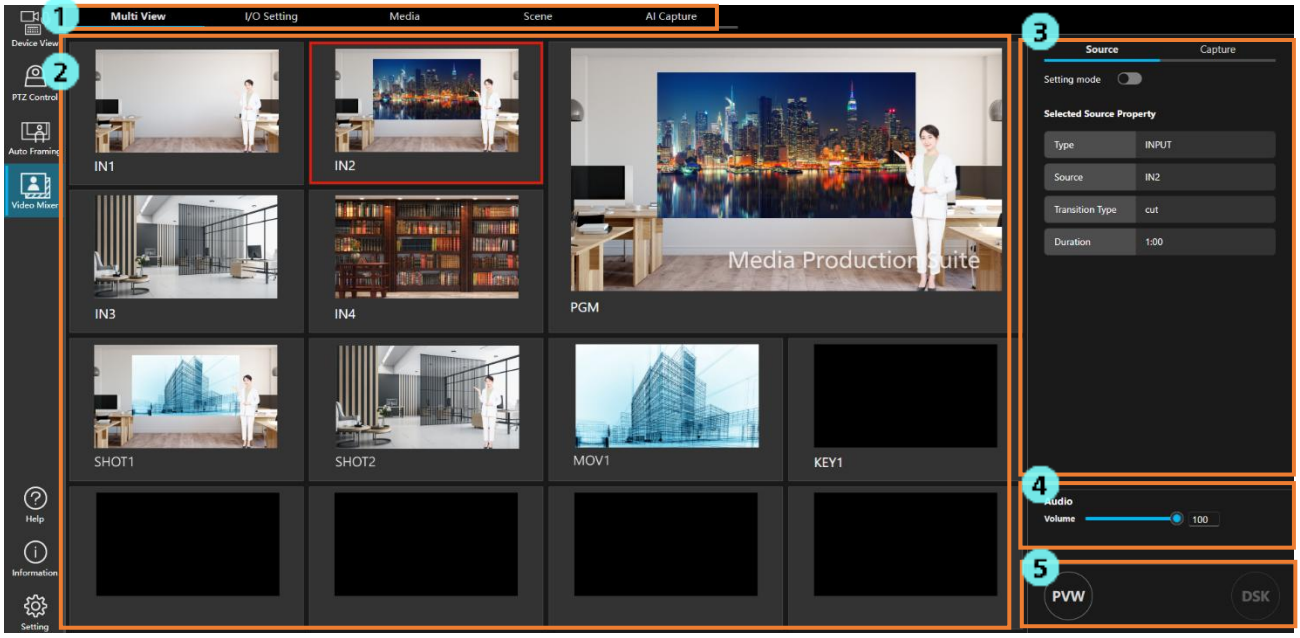
- Scene screen

  This is a screen that is used to manage a scene (composite video).

- AI Capture screen

  This is a screen that is used to perform the capture operation of an AI Keying Background image used in AI Keying.

Multi View Screen



1. Screen switching tab

   Use this tab to switch screens.

2. Multi view display

   This is a view that displays input source videos and created scenes.

Click the video thumbnail to switch between videos.

3. Source management / Capture operation area

The display contents are switched by the Source/Capture tab.

When the Source tab is selected

You can change the layout settings for multi-view and the settings for each view area.

When the Capture tab is selected

You can capture images from an output video.

4. Output audio adjustment area

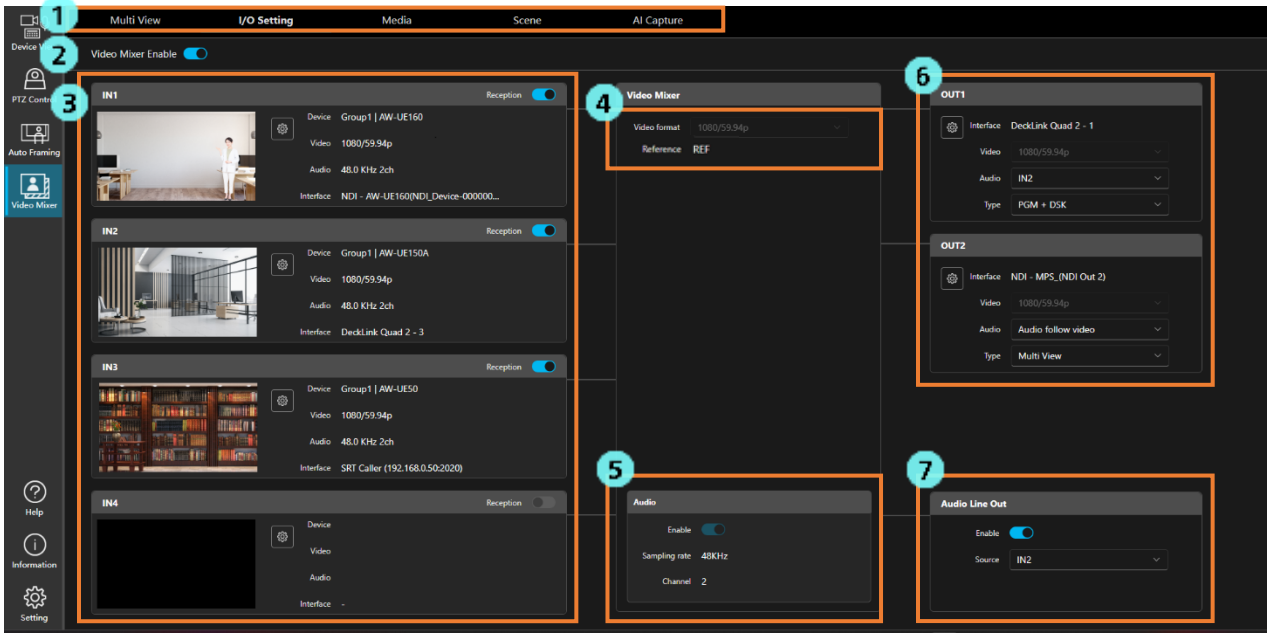
This is a slider that lets you adjust the volume of the output audio.

It can be set between 0% and 100%. It is also possible to directly enter a value into the text box.

5. PVW/DSK buttons

You can perform the preview and DSK operation using these buttons.

IO Setting Screen



1. Screen switching tab

Use this tab to switch screens.

2. Video Mixer function ON/OFF button

Use this button to turn ON/OFF this function.

3. Input source setting area

You can change the input source I/F settings, enable, and disable an input source.

4. System format setting area

You can set the system format of this function.

The current output reference is displayed in the Reference field.

5. Output audio setting area

You can enable or disable output audio.

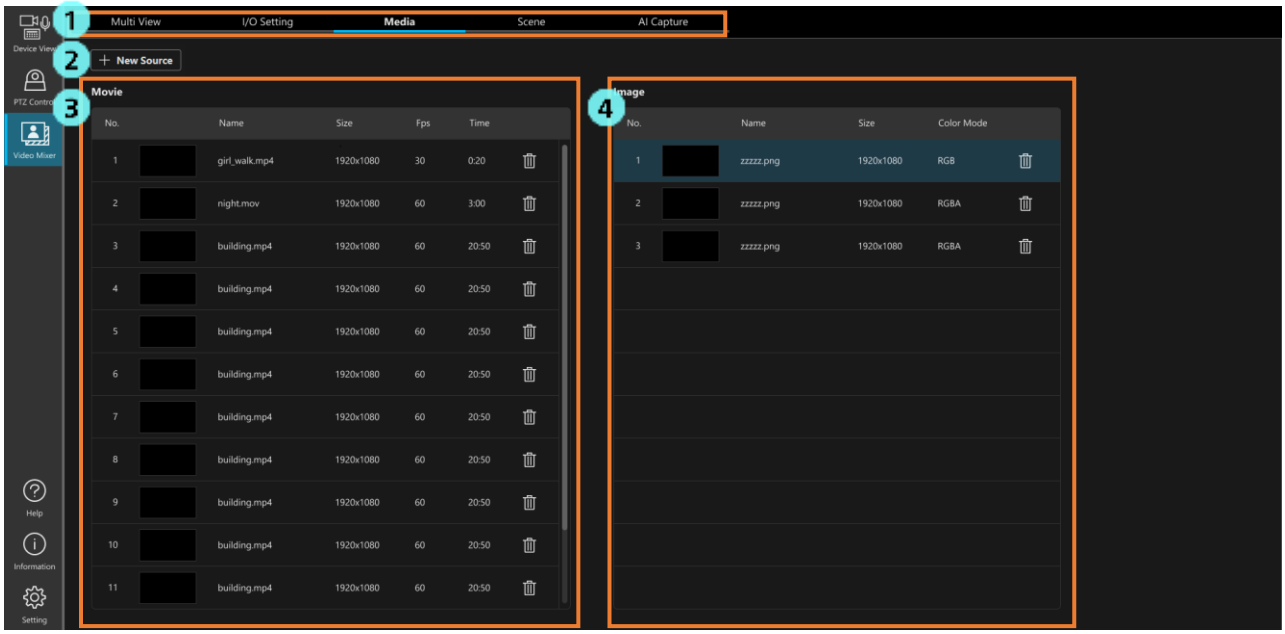
6. Output setting area

   You can set the video output I/F, output format, etc.

7. Line out setting area

   You can enable or disable audio output for the server PC’s default audio output device, and choose the audio output source.

Media Screen



1. Screen switching tab

   Use this tab to switch screens.

2. File registration button

   Use this button to register a new movie file or still image file.

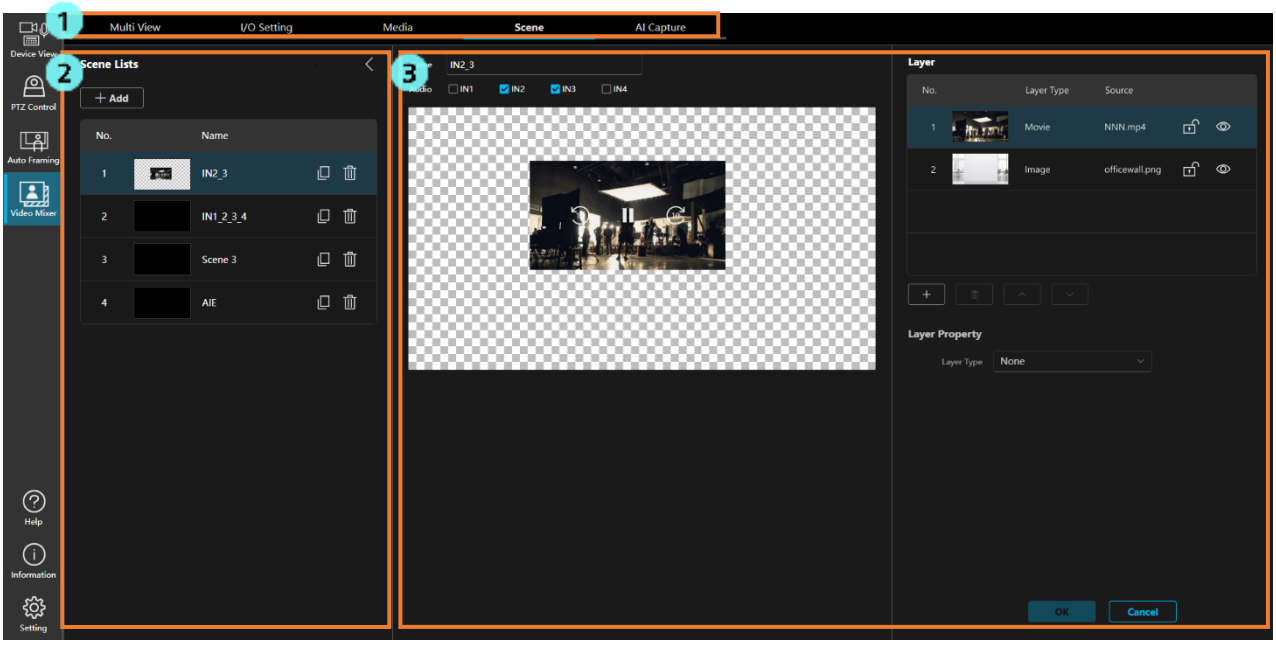
3. Movie file management area

   You can manage registered movie files here.

4. Still image file management area

   You can manage registered still image files here.

Scene Screen



1. Screen switching tab

   Use this tab to switch screens.

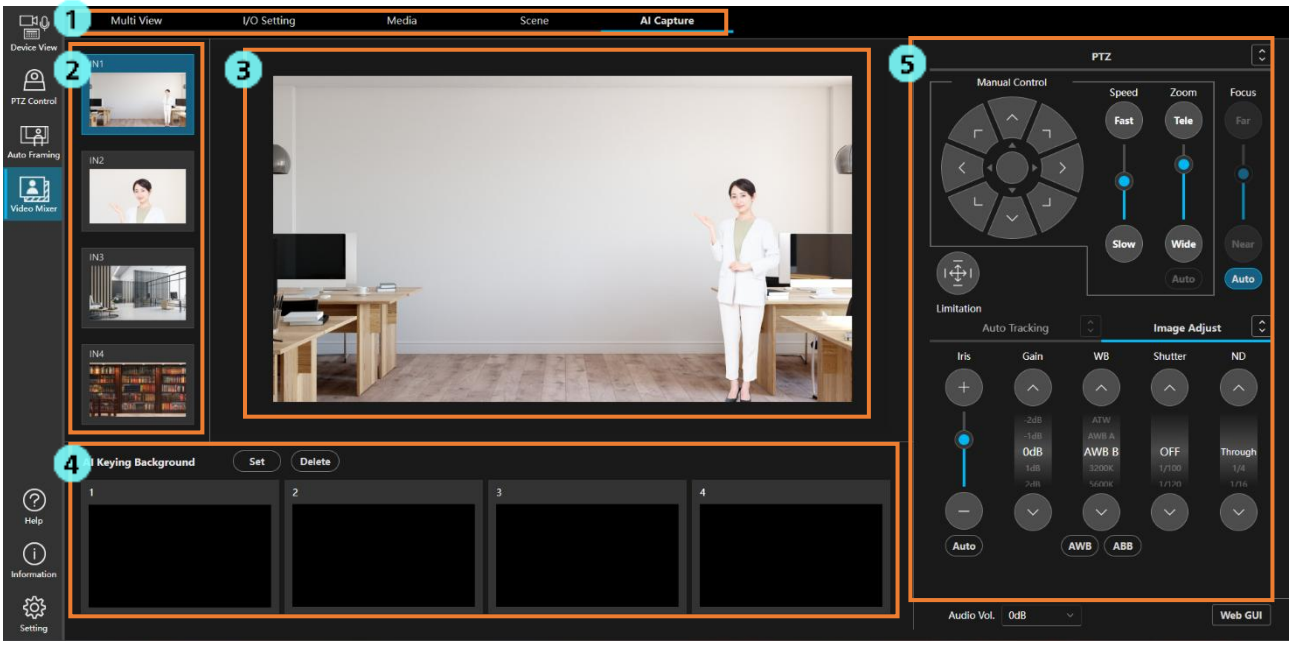
2. Scene management area

   You can manage registered scenes here.

3. Scene setting area

   You can configure the scene settings here.

AI Capture Screen



1. Screen switching tab

   Use this tab to switch screens.

2. Input source selection area

   You can select the capture target source of an AI Keying Background image here.

3. Input source video display

   This area displays a video for the source selected in the input source selection area.

4. AI Keying Background image management area

   You can capture an AI Keying Background image here.

5. PTZ camera operation area

   If the source selected in the input source selection area is a Panasonic PTZ camera, you can control the camera here.

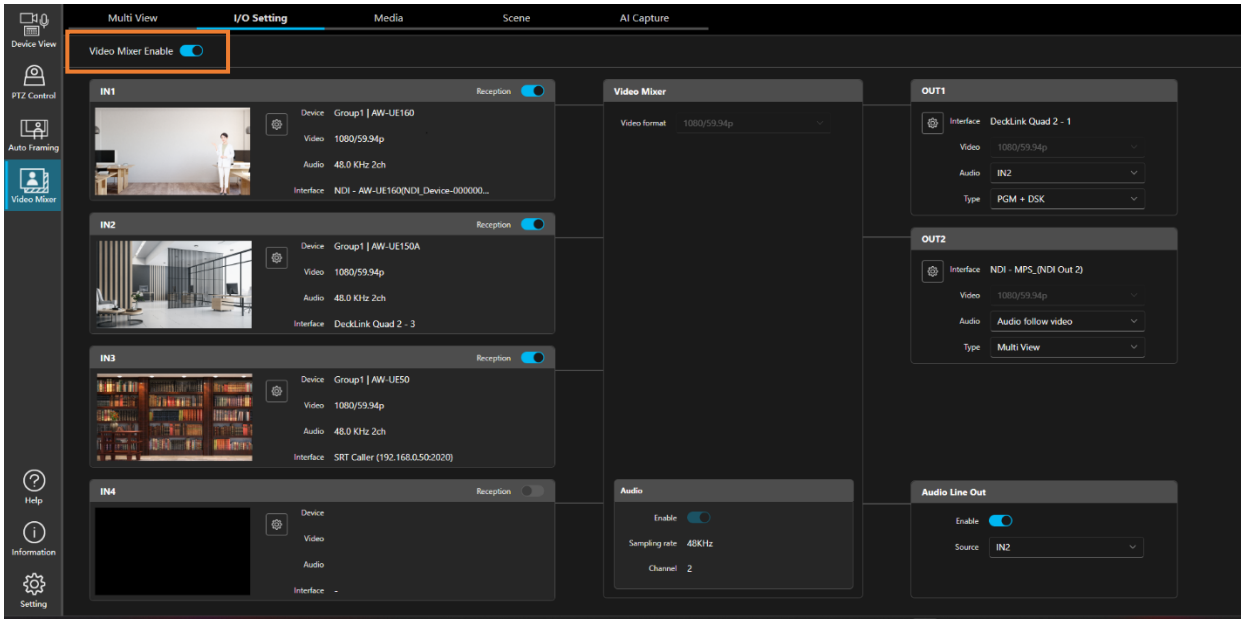
Usage Procedure of the Function

Switching the Operation of this Function between ON and OFF

You can use the Video Mixer Enable button on the IO Setting screen to turn this function ON and OFF.

If the function is turned OFF, the internal processing, and the video will not be output.

Some settings such as the system format settings can only be changed when the function is turned OFF.



The table below describes what you can and cannot do when the function is turned ON/OFF.

The items indicated with a circle (◯) can be performed.

		ON	OFF
Multi View screen	Video switching/output	◯	
	Video preview	◯	
	Multi view layout settings	◯	◯
	View settings (source assignment, transition settings, etc.)	◯	◯
	Capture output path settings	◯	◯
	PGM capture	◯	
	KEY capture	◯	
	Output audio volume adjustment	◯*	◯*

IO Setting screen	Input source I/F settings		○
	Input source reception ON/OFF	○	
	System format settings		○
	Output audio on/off		○
	Output I/F settings		○
	Output format settings		○
	Output type settings	○	○
	Output audio settings	○*	○*
	Line out on/off	○*	○*
Media screen	Movie/still image file registration	○	○
	Movie/still image file deletion	○	○
Scene screen	Scene registration	○	
	Scene editing	○	
	Scene deletion	○	
AI Capture screen	AI Keying Background image capture	○	
	Pan, Tilt, and Zoom operation of the PTZ camera	○	
	Pan/Tilt limitation settings of the PTZ camera	○	
	Focus/Iris operation of the PTZ camera	○	
	Gain, WB, Shutter, ND settings of the PTZ camera	○	

*: ○ only when output audio is enabled

Flow when Using this Function

Follow the instructions below when using this function.

Before using this function, set up the PC hardware according to “PC Hardware Settings”.

1. Register the PTZ camera on this software.
   (Only when a Panasonic PTZ camera is the input source.)
2. Make the following settings on the IO Setting screen:
   - System format
   - Audio settings (on/off)
   - Input source settings (I/F settings)
   - Output settings (I/F, format, output audio, and type settings)
   - Line out audio output settings
3. On the Media screen, register the movie files or still image files as video materials.
4. On the Scene screen, register scenes (composite videos).
5. If AI Keying is used in the scene (composite video), configure the settings for AI Keying.
   - Determine the camera position.
   - Capture the AI Keying Background image on the AI Capture screen.
6. Configure the view settings on the Multi View screen.
7. Switch videos on the Multi View screen to switch the output video.

Hereinafter, the setting procedure is described according to the flow above.

Registering the PTZ Camera

When using a Panasonic PTZ camera as the input source, register the PTZ camera on the Device Manager function screen of this software.
For details on the registration procedure, refer to “Registering a Device” in the operation manual of the Device Manager function.

Although a video from a PTZ camera can be used as the input source even without registering the camera, the following restrictions are applicable.

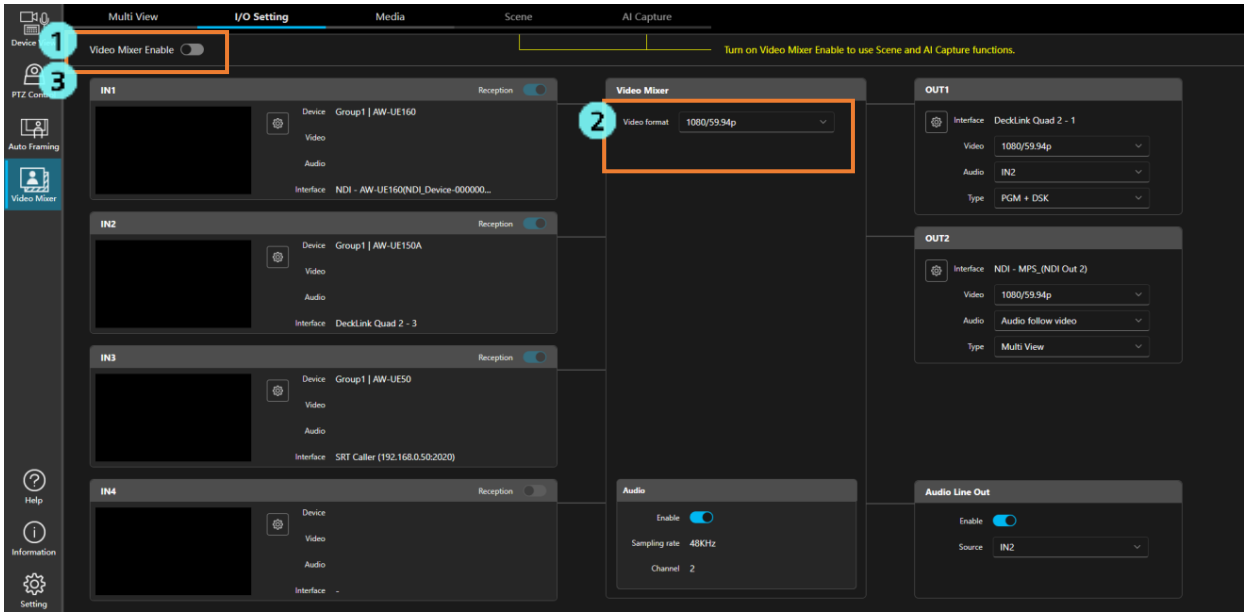
- You cannot control the PTZ camera (Pan/Tilt/Zoom, etc.) on this software.
  Go to the web screen of the PTZ camera or use a remote controller to control the camera.
- If NDI® is the I/F, the NDI® device must be selected manually.
- If SRT Caller is the I/F, the connection-destination IP address must be entered manually.

Configure the System Format Settings

System format refers to the video format used in the internal processing of this function.
The coordinate system when making the PinP settings in a scene (composite video) is decided based on the system format.

Configure the system format settings on the IO Setting screen.

1. Turn OFF the Video Mixer Enable button.
2. Select the system format from the Format list in the Video Mixer field at the center of the screen.
3. Turn ON the Video Mixer Enable button.

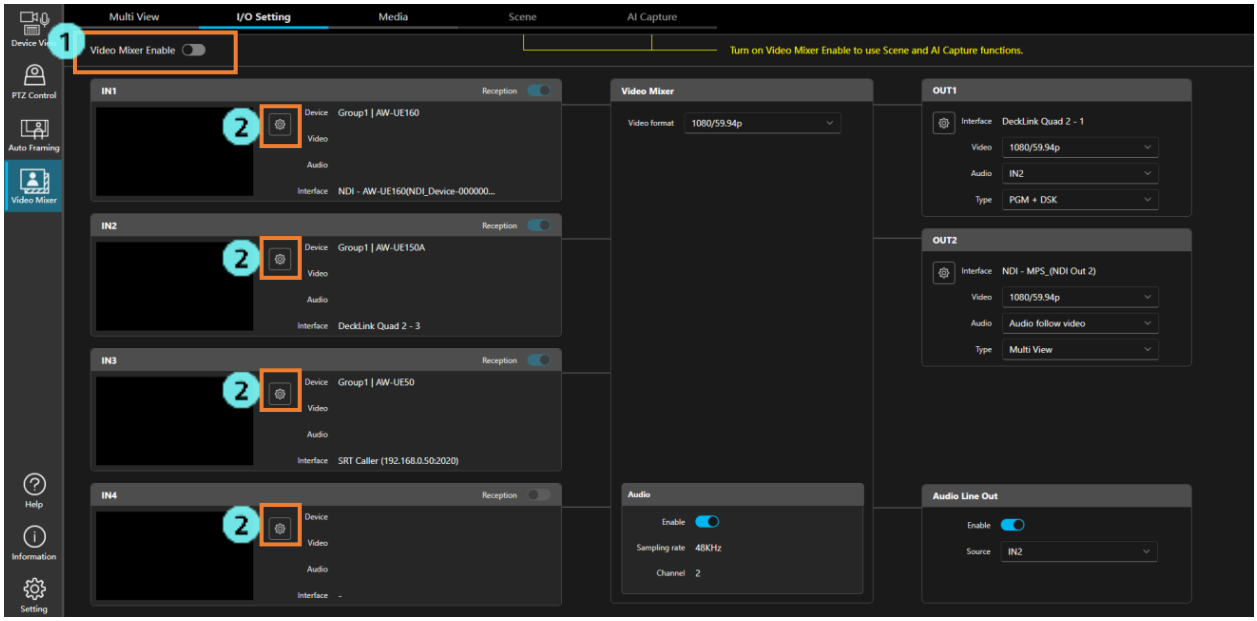


Configure the Input Source Settings (I/F is SDI)

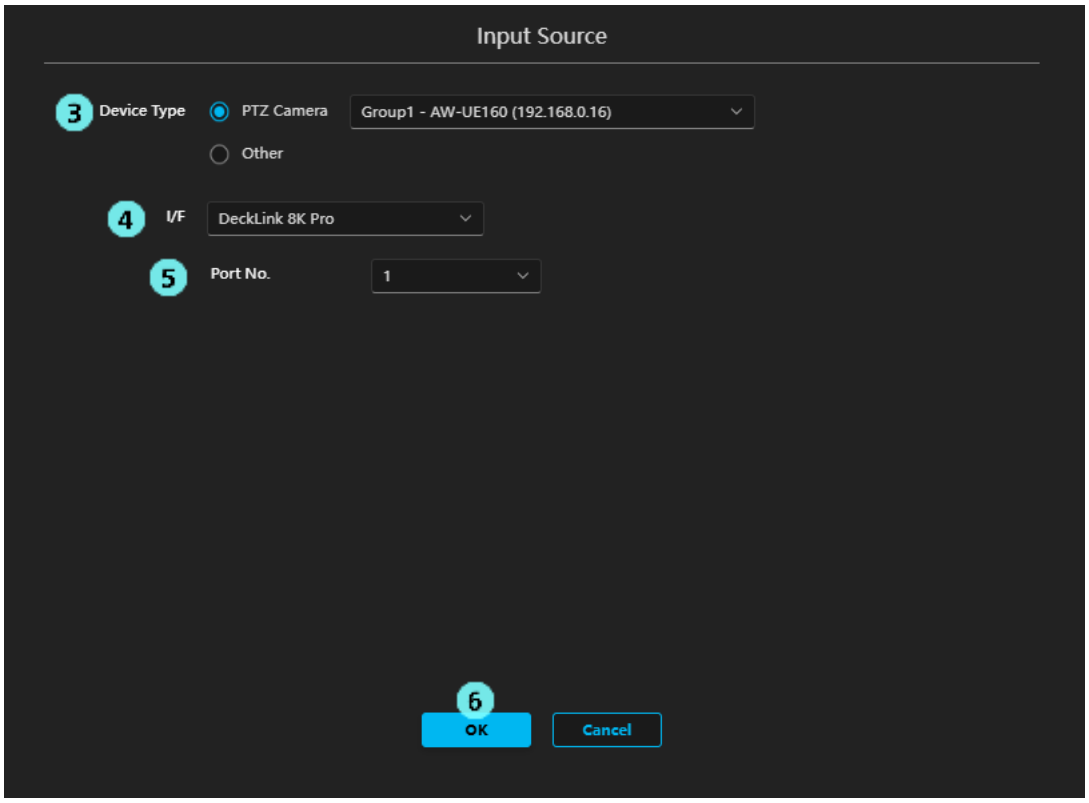
The setting procedure for using a video input through SDI as the input source is as described below.

* Configure the settings for the Blackmagic SDI I/F device in advance according to “PC Hardware Settings”.
(The procedure example below assumes that a DeckLink 8K Pro is connected)

1. Open the IO Setting screen and turn OFF the Video Mixer Enable button.
2. Click the Settings button of the input source for which you want to configure the settings and display the settings dialog box.

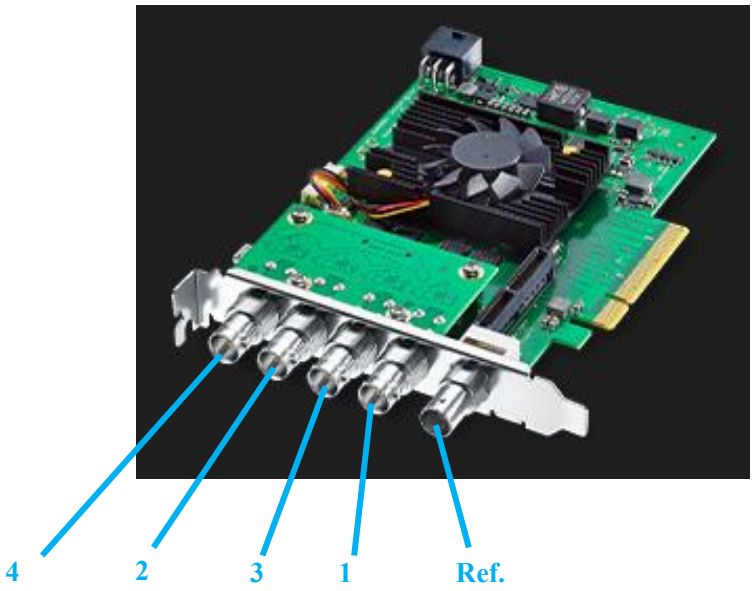


3. Set the device in the Device Type field.
   - When the device is a Panasonic PTZ camera
     Select [PTZ Camera], and select a camera from the list of registered PTZ cameras.
   - When the device is other than a Panasonic PTZ camera
     Select [Other] and enter a device name.
     Characters available: Single-byte numbers, single-byte alphabets (upper case, lower case), single-byte space, single-byte symbols _ - ( )
     Number of characters: 0 to 32
4. Select [DeckLink 8K Pro] in I/F.
5. In Port No., specify the port number with which the input source will be connected.
   Specify the port number with reference to the sequence of the port numbers of the Blackmagic SDI I/F device described on the next page.
6. Click the OK button to close the Settings screen.

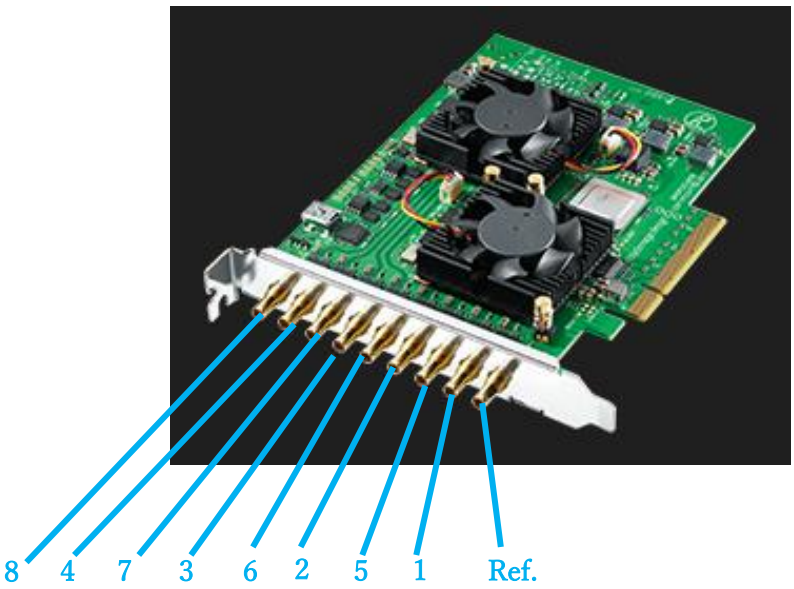


Reference: Sequence of port numbers of Blackmagic SDI I/F device

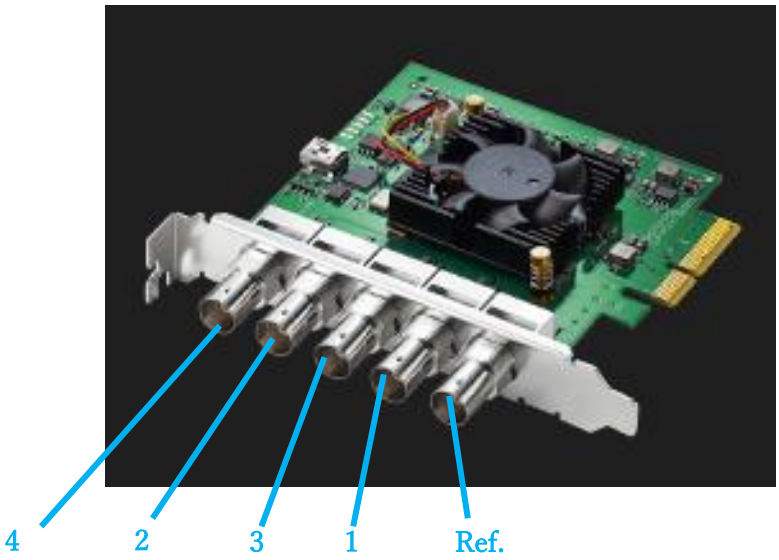
- For DeckLink 8K Pro



- For DeckLink Quad 2



- For DeckLink Duo 2



Configure the Input Source Settings (I/F is NDI®)

Follow the procedure below to use a video input through NDI® as the input source.

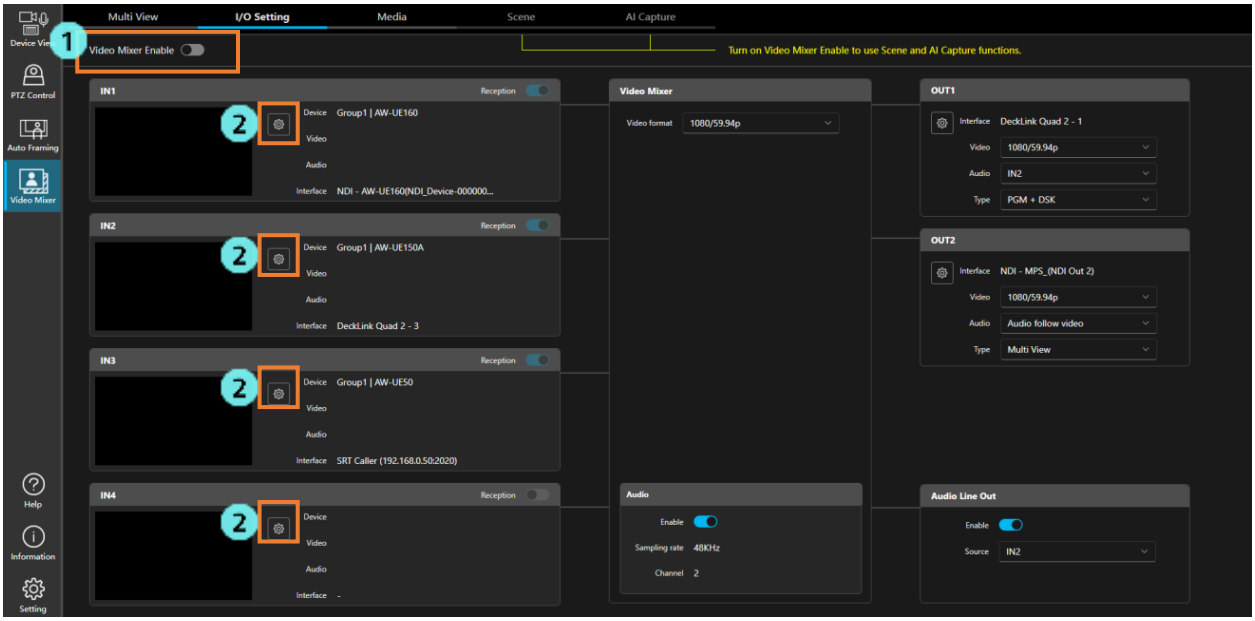
The procedure is different depending on whether the input source device is a Panasonic PTZ camera or other than a Panasonic PTZ camera

<Precautions>

* When you use NDI® HX1, NDI® HX2, NDI® HX3 for input, limit the number of inputs to two.
  If you have more than 3 inputs, performance may be low, causing dropped frames.
* To use NDI® HX1, NDI® Tools must be installed on the PC on which this software is installed.
  Before using this software, download NDI® Tools from the Internet and install it.

■ When the device is a Panasonic PTZ camera

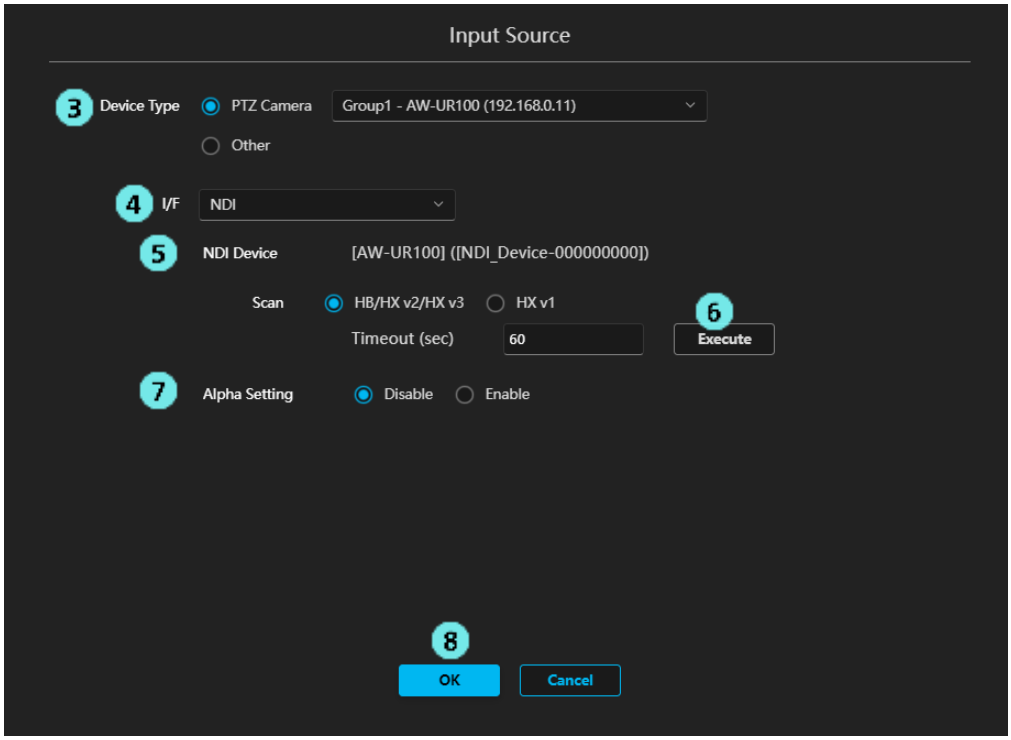
1. Open the IO Setting screen and turn OFF the Video Mixer Enable button.
2. Click the Settings button of the input source for which you want to configure the settings and display the settings dialog box.



3. Select [PTZ Camera] in the Device Type field, and select a camera from the list of registered PTZ cameras.
4. Select [NDI] in I/F.
5. Set the Scan settings field according to the NDI® output setting of the PTZ camera.
   - When the NDI® output setting of the PTZ camera is [High bandwidth NDI] or [NDI | HX V2]
     Select [HB/HX v2/HX v3].
   - When the NDI® output setting of the PTZ camera is [NDI | HX]
     Select [HX v1].
6. Click the Execute button.

The NDI® devices on the network are scanned, and if the PTZ camera selected in the Device Type field is detected successfully, the NDI® Machine Name and NDI® Device Name of the PTZ camera are displayed in the NDI® Device field.

7. Select Enable or Disable for the alpha channel of the NDI® stream.
8. Click the OK button to close the Settings screen.



<Notes>

・ Check the following if the PTZ camera is not detected correctly when the Execute button is clicked in step 6:

- Make sure the PTZ camera is connected on the network and the power is ON.
- Make sure the stream output setting of the PTZ camera is set to NDI®.
- Make sure the Scan settings field is selected according to the NDI® output setting of the PTZ camera.

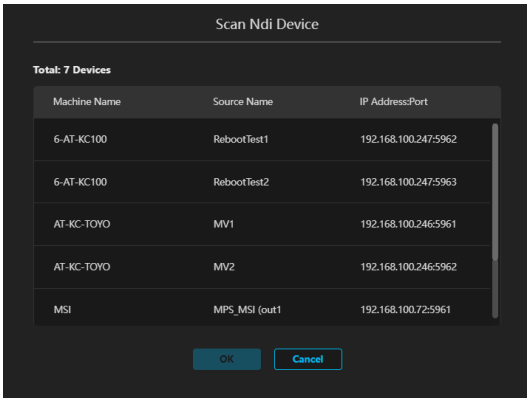
■ When the device is other than a Panasonic PTZ camera

1. Follow step 1 and 2 in “When the device is a Panasonic PTZ camera” to open the settings dialog.
2. Select [Other] in the Device Type field and enter a device name.

   Characters available: Single-byte numbers, single-byte alphabets (upper case, lower case), single-byte space, single-byte symbols _ - ( )

   Number of characters: 0 to 32
3. Select [NDI] in I/F.
4. Click the Execute button.

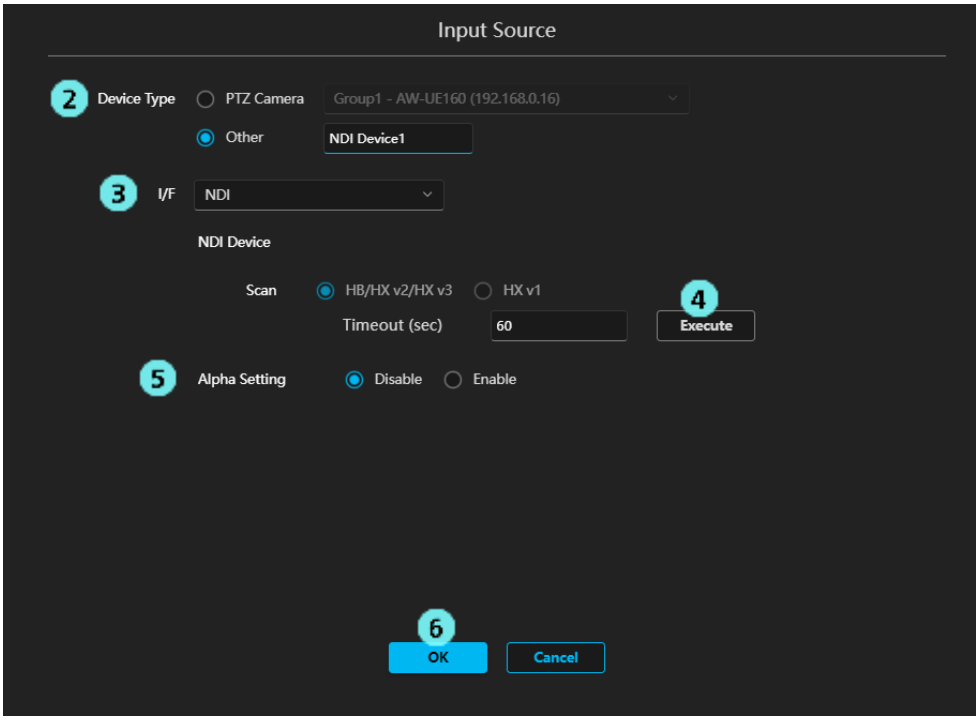
A dialog box for scanning the NDI® devices is displayed and a list of NDI® devices that exist on the network is displayed. Select the NDI® device you want to use as the input source, and click the OK button to close the dialog box.



* At least 10 seconds may be required before an NDI® device is detected.

* If an NDI® device that exists on the network is not displayed in the dialog box, click the Cancel button to close the dialog box and perform the scan again.

5. Select Enable or Disable for the alpha channel of the NDI® stream.
6. Click the OK button to close the Settings screen.



Configure the Input Source Settings (I/F is SRT)

Follow the procedure below to use a video input through SRT as the input source.

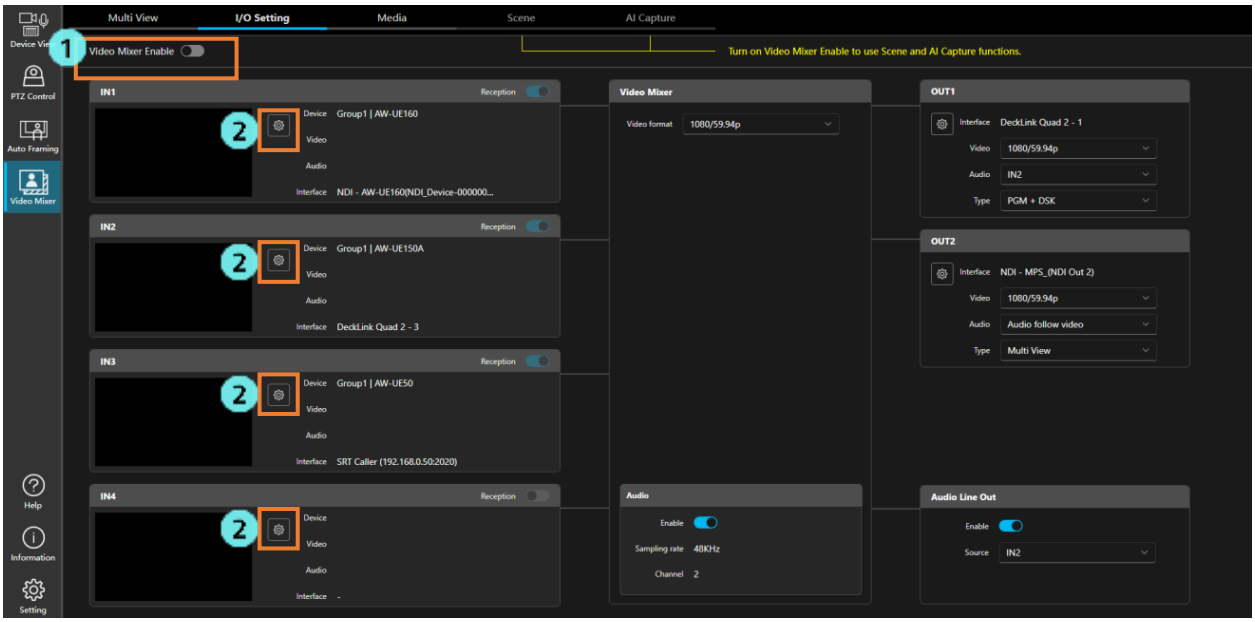
The settings differ depending on whether the input-source device is the SRT Caller or Listener.

* The I/F configuration should be a reverse of the device configuration. They should not mirror each other.

■ When the input-source device is the SRT Caller

The I/F settings for this function should be set as SRT Listener.

1. Open the IO Setting screen and turn OFF the Video Mixer Enable button.
2. Click the Settings button of the input source for which you want to configure the settings and display the settings dialog box.



3. Set the device in the Device Type field.
   - When the device is a Panasonic PTZ camera

   Select [PTZ Camera], and select a camera from the list of registered PTZ cameras.
   - When the device is other than a Panasonic PTZ camera

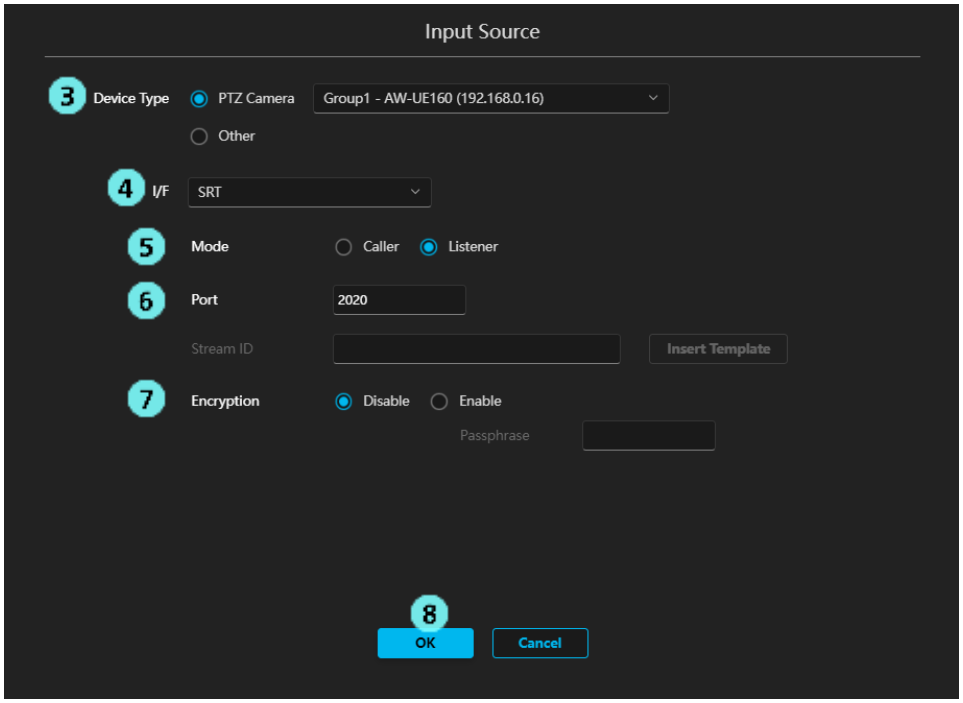
   Select [Other] and enter a device name.

   Characters available: Single-byte numbers, single-byte alphabets (upper case, lower case), single-byte space, single-byte symbols _ - ( )

   Number of characters: 0 to 32
4. Select [SRT] in I/F.
5. Select [Listener] in Mode.
6. In Port, set the port number used for waiting.
7. In Encryption, select whether to enable or disable encryption.

   Disable: Select this option when encryption is not to be performed.

   Enable: Select this option when encryption is to be performed, and enter the Passphrase.
8. Click the OK button to close the Settings screen.



＜Note＞

・Please set the latency value of the input source device between 0 and 2000 milliseconds.
If you set a value of 2001 milliseconds or higher, the connection may fail.

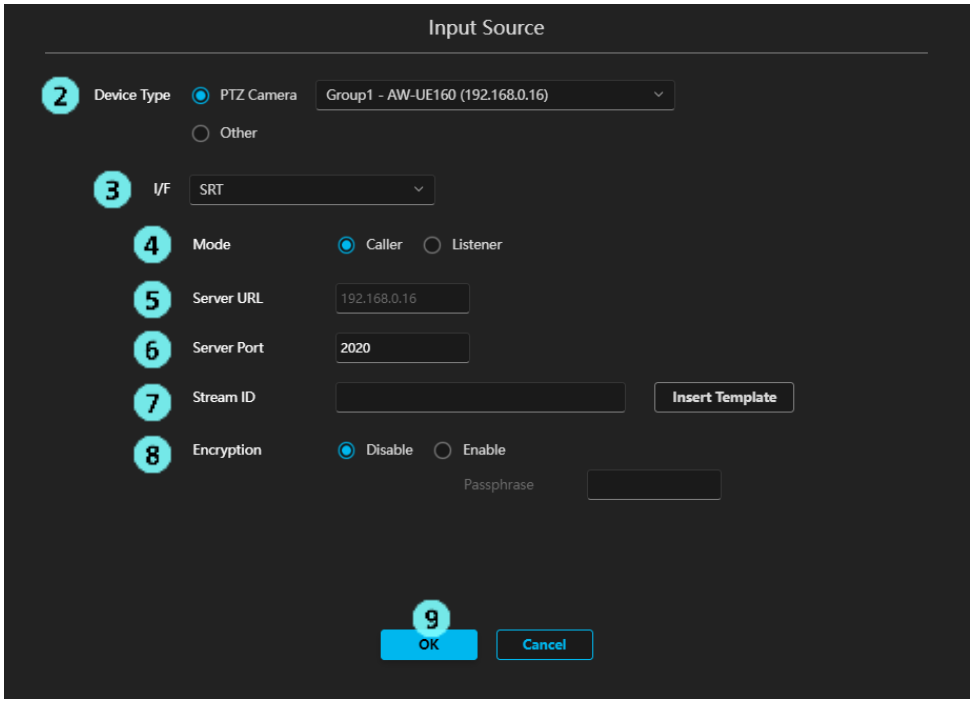
■ When the input-source device is the SRT Listener

The I/F settings for this function should be set as SRT Caller.

1. Follow step 1 and 2 in “When the input-source device is SRT Caller” to open the settings dialog.
2. Set the device in the Device Type field.
   ・When the device is a Panasonic PTZ camera
   Select [PTZ Camera], and select a camera from the list of registered PTZ cameras.
   ・When the device is other than a Panasonic PTZ camera
   Select [Other] and enter a device name.
   Characters available: Single-byte numbers, single-byte alphabets (upper case, lower case), single-byte space, single-byte symbols _ - ( )
   Number of characters: 0 to 32
3. Select [SRT] in I/F.
4. Select [Caller] in Mode.
5. In Server URL, set the IP address of the input-source device.
   If [PTZ Camera] is selected in the Device Type field, the IP address of the PTZ camera is set automatically.
6. In Server Port, set the port number.
7. If necessary, set the Stream ID.
   If you click the [Insert Template] button, the following Stream ID is entered automatically.
   #!::m=publish,r=PanasonicStream
8. In Encryption, select whether to enable or disable encryption.
   Disable: Select this option when encryption is not to be performed.

Enable: Select this option when encryption is to be performed, and enter the Passphrase.

9. Click the OK button to close the Settings screen.



Starting Streaming Video from the Input Source

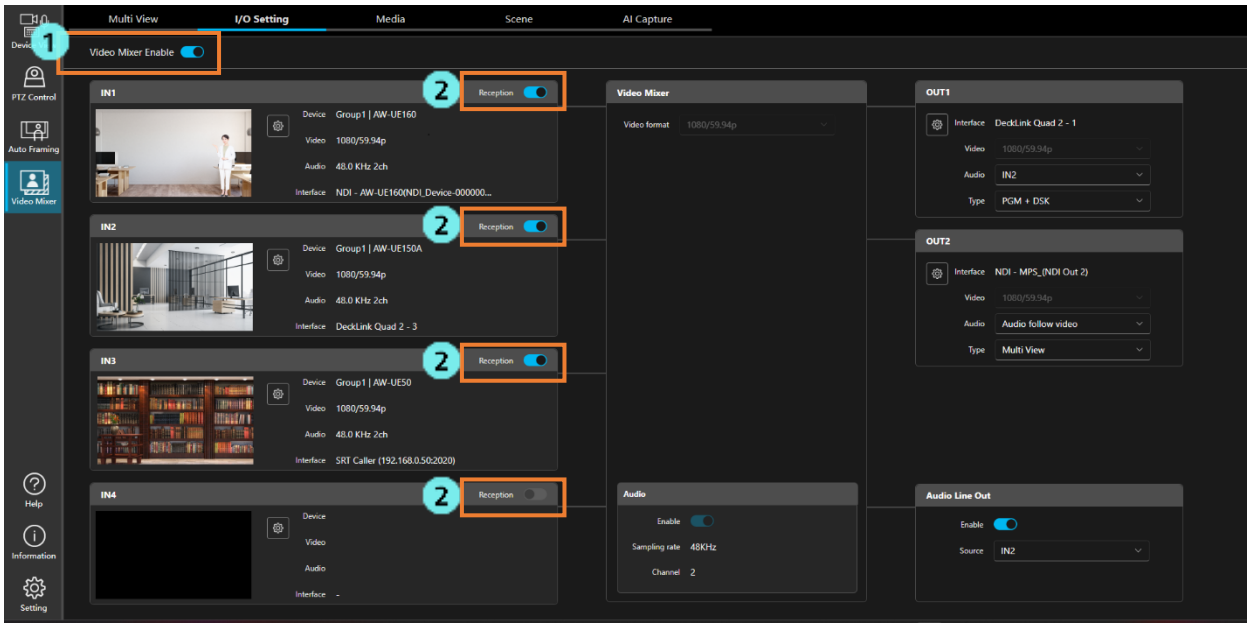
To start streaming video from input sources after the settings are configured for each input source, perform the operation described below.

1. Turn ON the Video Mixer Enable button.
2. To start streaming video, turn ON the Reception button for the input source from which you want to stream video. When the video is successfully received, a thumbnail image of the video is displayed, and the resolution, frame rate of the video and audio format is displayed in the Format field.

* If “Err - Unsupported format” is displayed in red, turn the Reception button OFF, check the items below, and then turn the Reception button ON again.

  - Confirm that the video format of the input source matches one of the formats listed under “Supported formats”.
  - Confirm that a video signal is being output from the input source.

  When the I/F is SDI, the audio format is displayed as “48 kHz 2 channels” regardless of the audio format of the input source. When the I/F is NDI or SRT, the sampling rate and the number of channels of the input source audio are displayed. If the audio format is not listed under “Supported Interfaces,” “(Unsupported)” is appended to the displayed audio format.



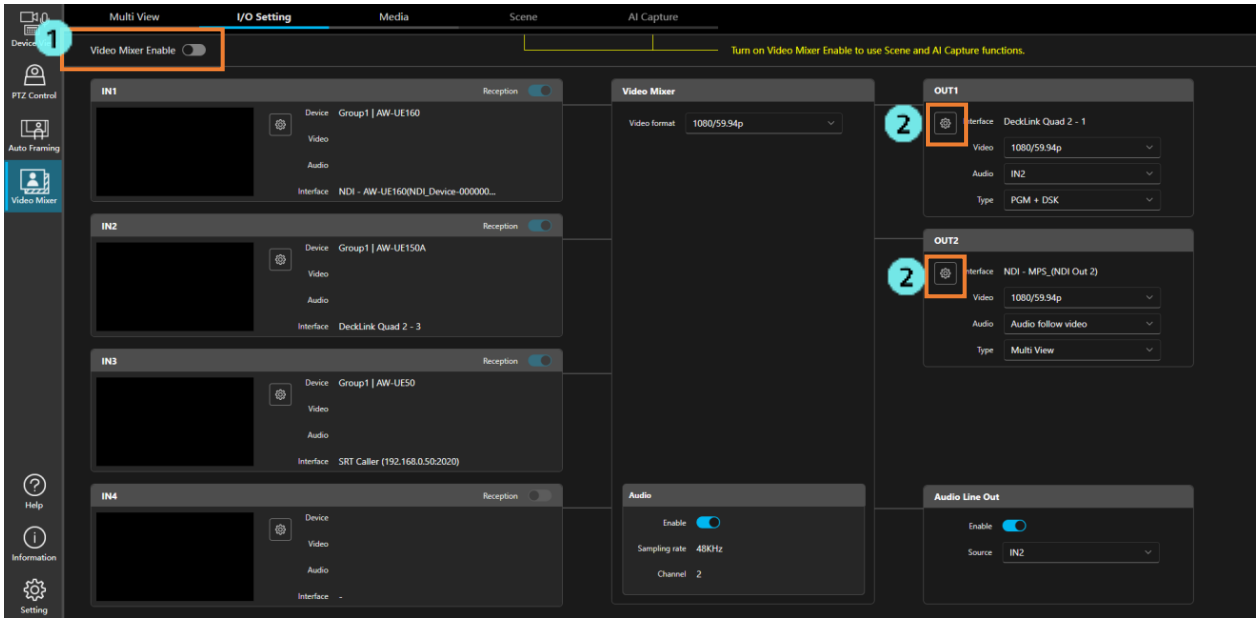
Configure the Output I/F Settings (I/F is SDI)

The setting procedure when you want to output a video through SDI is as described below.

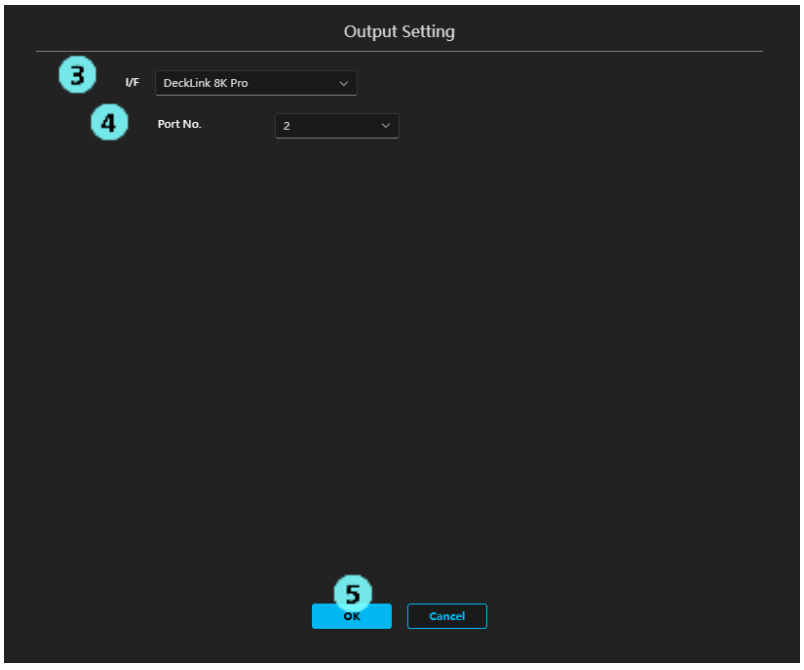
(The procedure example below assumes that a DeckLink 8K Pro is connected)

* Configure the settings for the Blackmagic SDI I/F device in advance according to “PC Hardware Settings”.

1. Open the IO Setting screen and turn OFF the Video Mixer Enable button.
2. Click the Settings button for the output you want to set and display the settings dialog box.



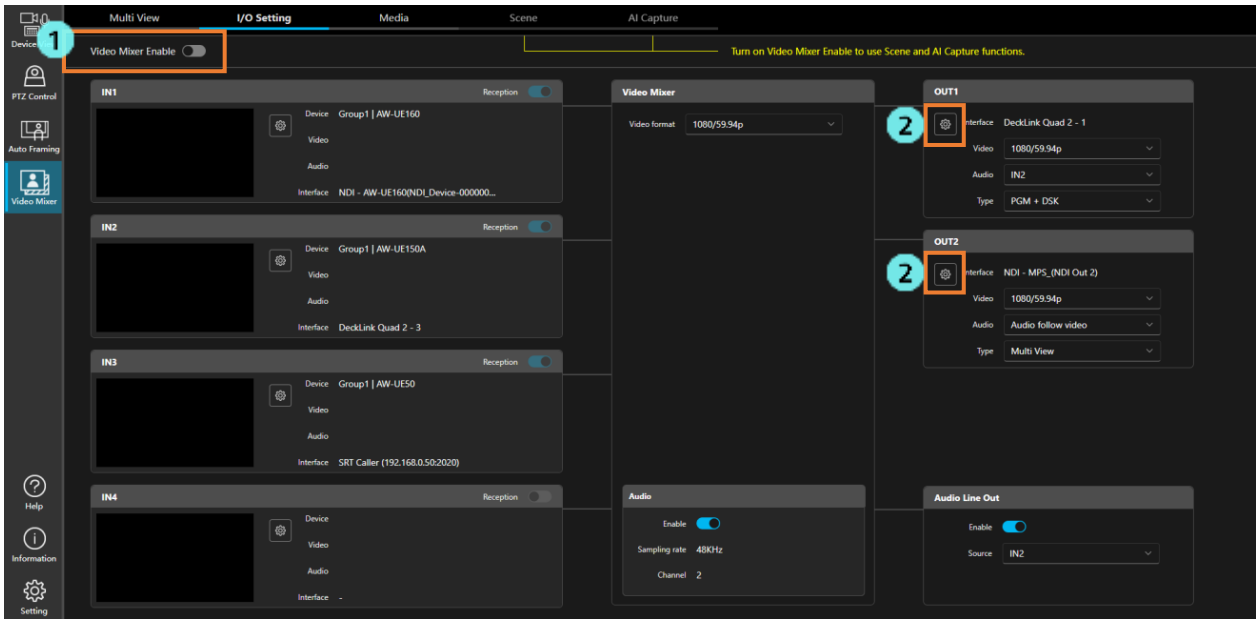
3. Select [Decklink 8K Pro] in I/F.
4. In Port No., specify the port number with which to connect the output-destination device.
   Specify the port number with reference to the sequence of the port numbers of the Blackmagic SDI I/F device described in “Configure the Input Source Settings (I/F is SDI)”.
5. Click the OK button to close the Settings screen.



Configure the Output I/F Settings (I/F is NDI®)

The setting procedure when you want to output a video through NDI® is as described below.

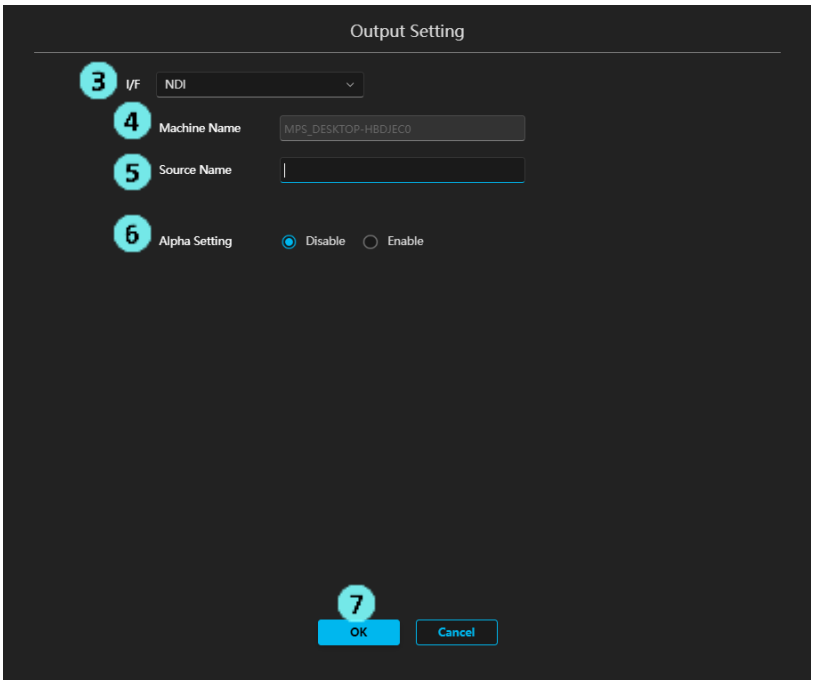
1. Open the IO Setting screen and turn OFF the Video Mixer Enable button.
2. Click the Settings button for the output you want to set and display the settings dialog box.



3. Select [NDI] in I/F.
4. The NDI® Machine Name for this output is automatically set to “MPS_[Name of PC]”.
5. Enter the NDI® Source Name for this output.

   Characters available: Single-byte numbers, single-byte alphabets (upper case, lower case), single-byte space, single-byte symbols _ - ( )

   Number of characters: 0 to 32
6. Select Enable or Disable for the alpha channel.
7. Click the OK button to close the Settings screen.



Configure the Output I/F Settings (I/F is SRT)

Follow the procedure below to output a video through SRT.

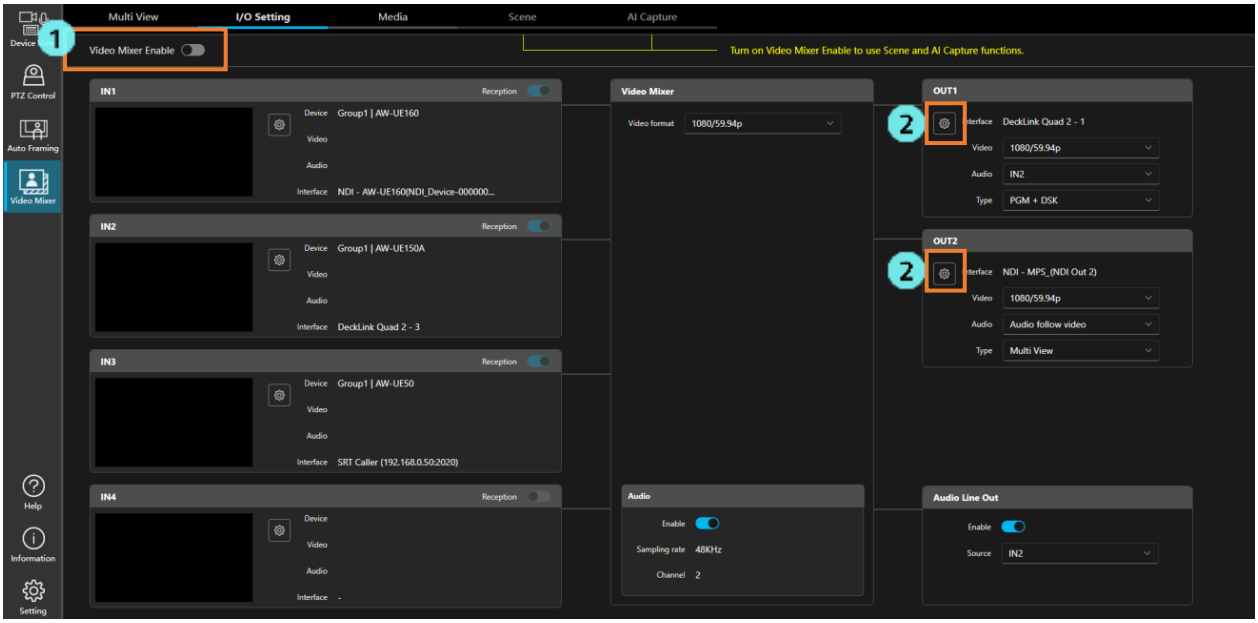
The settings differ depending on whether the output-destination device is the SRT Caller or Listener.

* The I/F configuration should be a reverse of the device configuration. They should not mirror each other.

■ When the output-destination device is the SRT Caller

The I/F settings for this function should be set as SRT Listener.

1. Open the IO Setting screen and turn OFF the Video Mixer Enable button.
2. Click the Settings button for the output you want to set and display the settings dialog box.



3. Select [SRT] in I/F.
4. Select [Listener] in Mode.
5. In Port, set the port number used for waiting.
6. Set the TTL/HOP Limit in the range of 1 to 254 (default value: 254)
7. Set Latency in the range of 0 to 99999 (default value: 120) *
8. In Encryption, select whether to enable or disable encryption.

   Disable: Select this option when encryption is not to be performed.

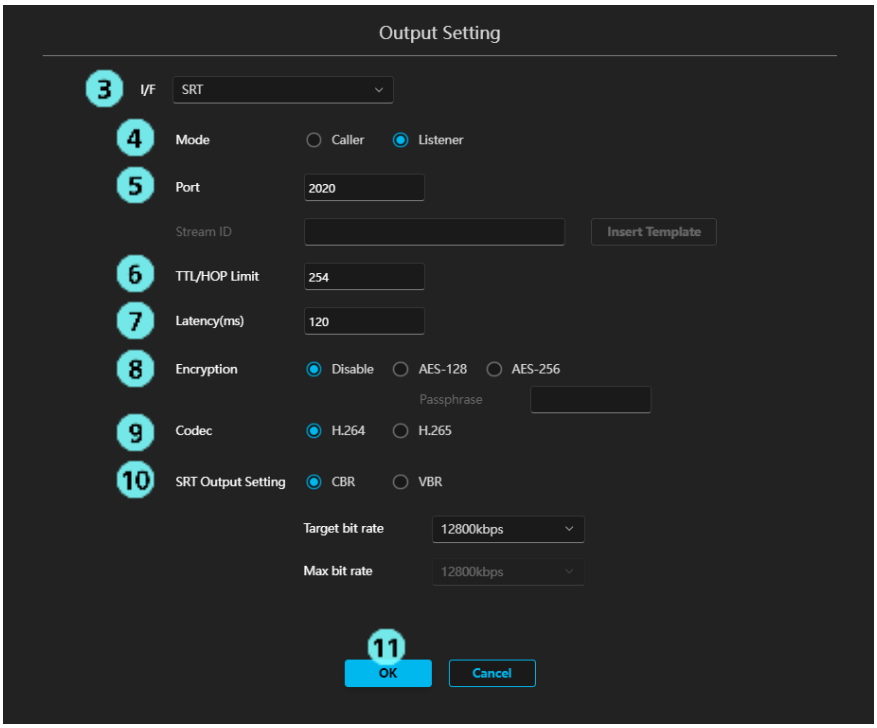
   AES-128 / AES-256: Select this option when encryption is to be performed, and enter the Passphrase.
9. Currently, Codec is fixed as H.264.
10. Set the bit rate for output.

    CBR: Constant bit rate setting.

    Set the target bit rate in “Target bit rate”.

    VBR: Variable bit rate setting.

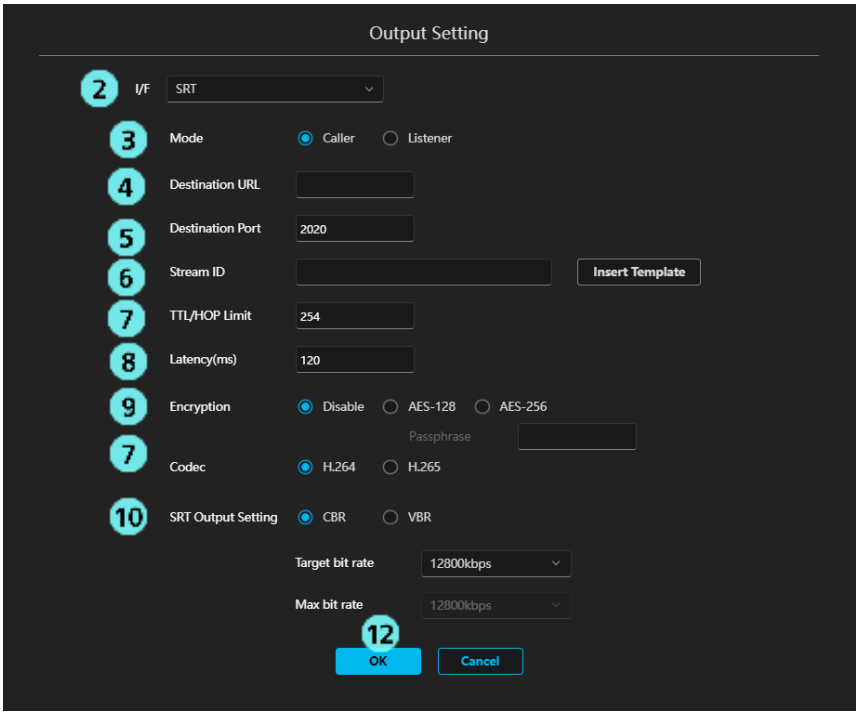
    Set the target bit rate in “Target bit rate” and the maximum bit rate in “Max bit rate”.
11. Click the OK button to close the Settings screen.



■ When the output-destination device is the SRT Listener

The I/F settings for this function should be set as SRT Caller.

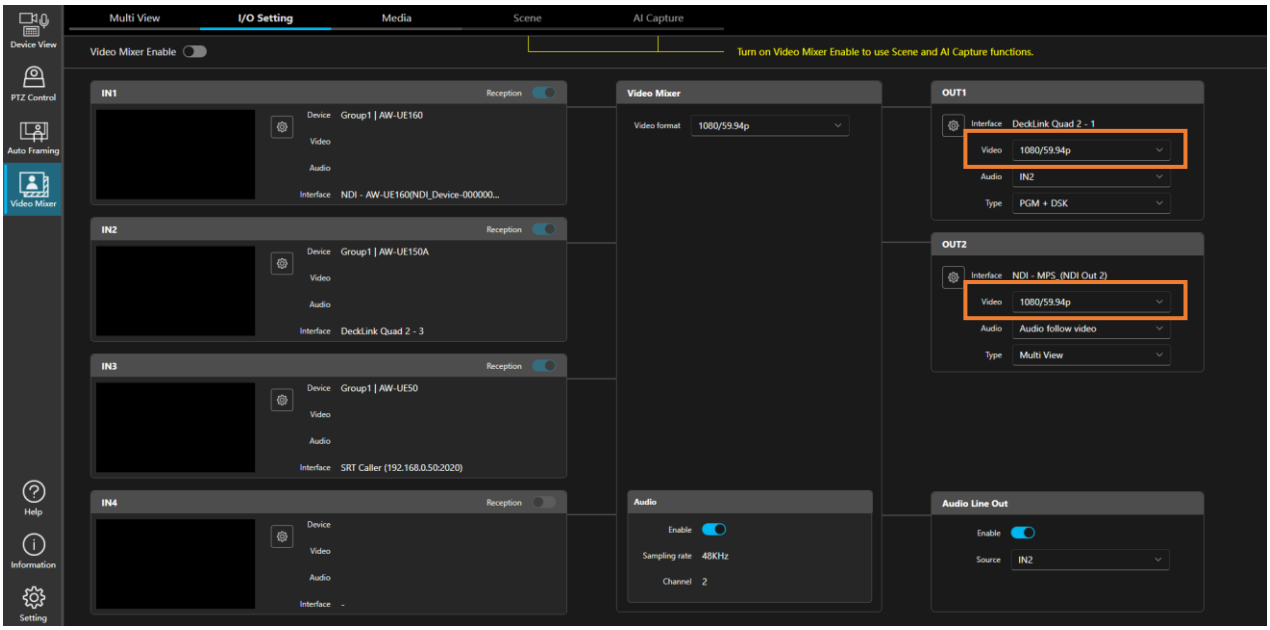
1. Follow step 1 and 2 in “When the output-destination device is SRT Caller” to open the settings dialog.
2. Select [SRT] in I/F.
3. Select [Caller] in Mode.
4. In Destination URL, enter the IP address of the output-destination device.
5. In Destination Port, set the port number of the output-destination device.
6. If necessary, set the Stream ID.
   If you click the [Insert Template] button, the following Stream ID is entered automatically.
   #!::m=publish,r=PanasonicStream
7. Set the TTL/HOP Limit in the range of 1 to 254 (default value: 254)
8. Set Latency in the range of 0 to 99999 (default value: 120) *
9. In Encryption, select whether to enable or disable encryption.
   Disable: Select this option when encryption is not to be performed.
   AES-128 / AES-256: Select this option when encryption is to be performed, and enter the Passphrase.
10. Currently, Codec is fixed as H.264.
11. Set the bit rate for output.
    CBR: Constant bit rate setting.
    Set the target bit rate in “Target bit rate”.
    VBR: Variable bit rate setting.
    Set the target bit rate in “Target bit rate” and the maximum bit rate in “Max bit rate”.
12. Click the OK button to close the Settings screen.



* : If there are noticeable interruptions in the video and audio of the SRT transmission, please increase the latency and adjust it.

Configure the Output Format Settings

You can set the output format from the list in the Video field of each output.



The output format that can be set varies depending on the system format.

System format	Available output format		
1080/59.94p	1080/59.94p	1080/59.94i *	1080/29.97p
1080/50p	1080/50p	1080/50i *	1080/25p
1080/29.97p	1080/29.97p		
1080/25p	1080/25p		
1080/24p	1080/24p		
1080/23.98p	1080/23.98p		
720/59.94p	720/59.94p		
720/50p	720/50p		

* Can be set only when the output I/F is SDI.

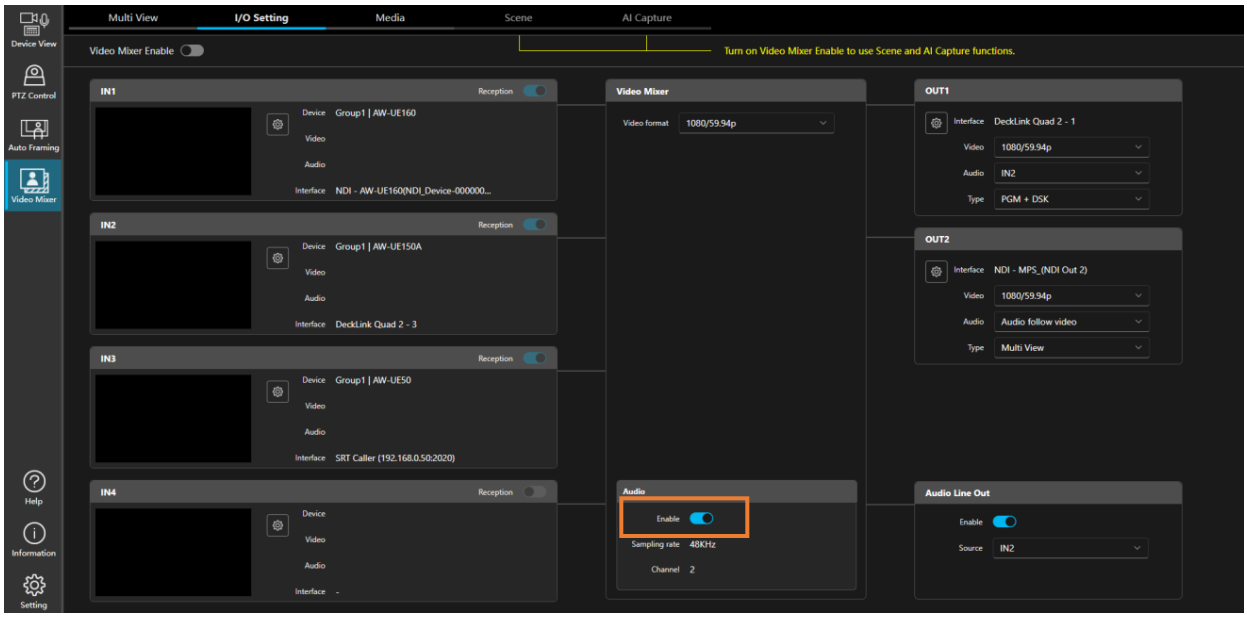
Configure the Output Audio Settings

If you want to play the audio along with the output video, set Enable in the Audio setting area to ON.

The audio is output only in the following output format.

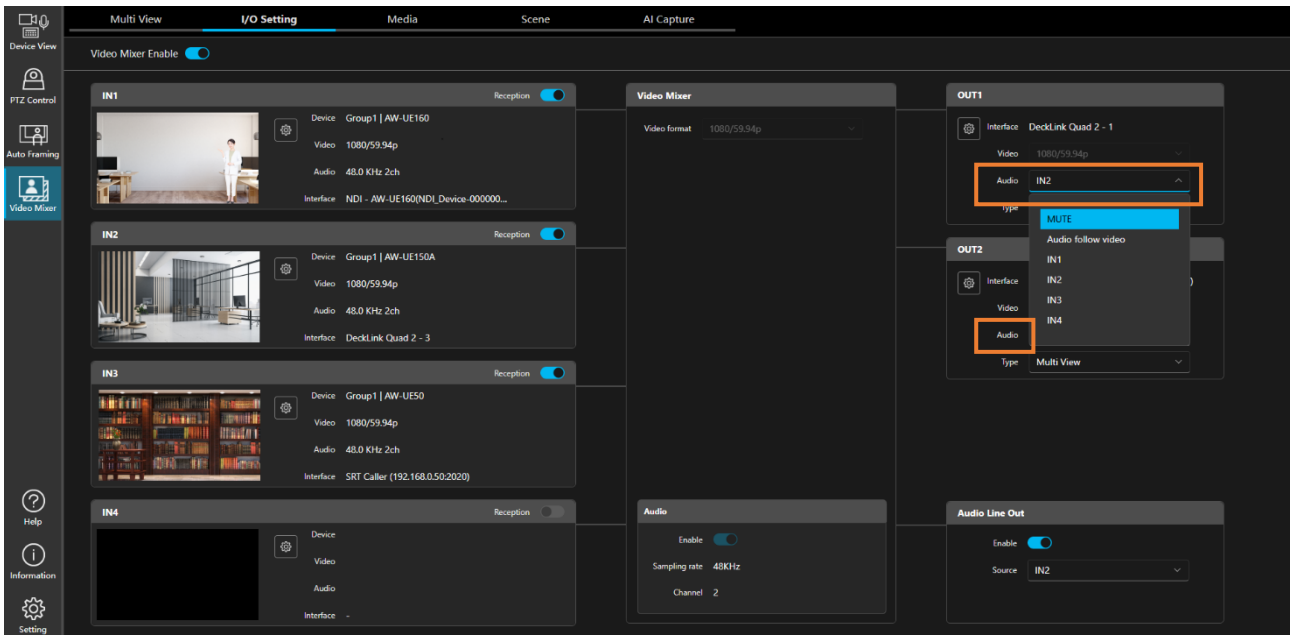
Sampling rate: 48 KHz

Number of channels: 2



Configure the Output Audio Source Settings

Set the output audio source for each output in the Audio field.



■ Output Audio

MUTE : Mute

Audio follow video : Select audio source that corresponds to material selected as PGM Out in Multi View

IN1 : Input1 embedded audio

IN2 : Input2 embedded audio

IN3 : Input3 embedded audio

IN4 : Input4 embedded audio

PVW : Select the audio source that corresponds to material selected as Preview in Multi View*

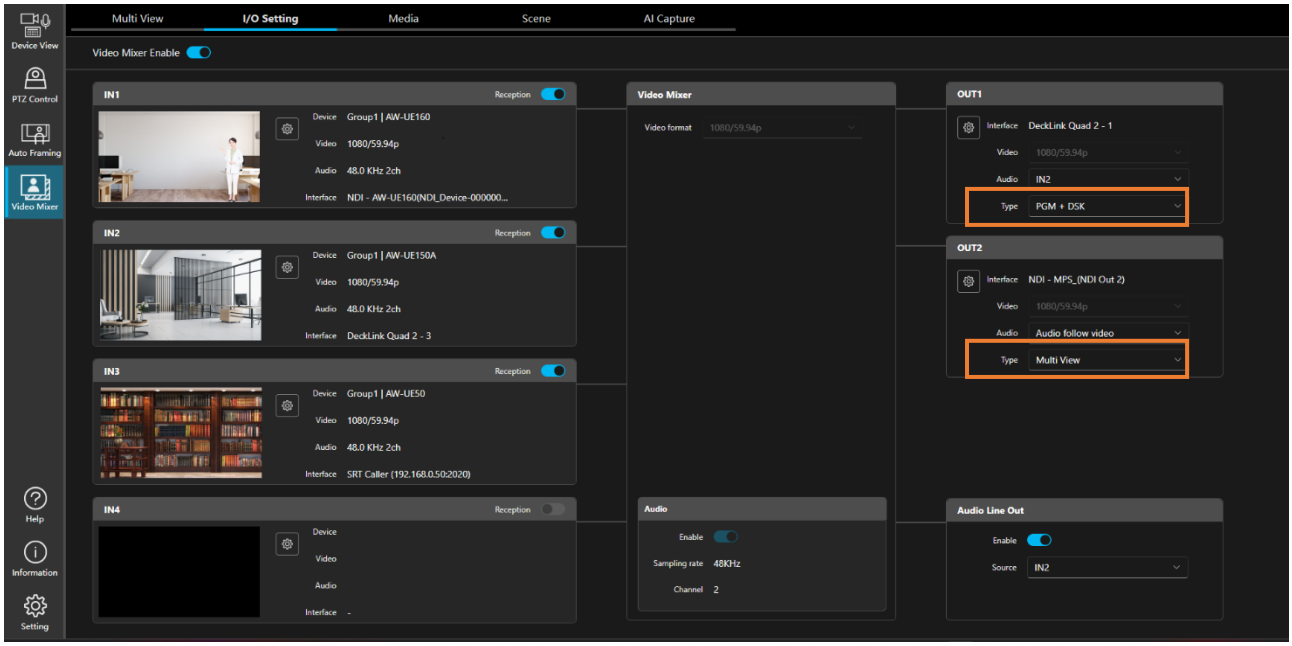
*: Preview is only selectable in Line out audio output

Audio sources that correspond to materials selected in Audio follow video and PVW are as follows.

Selectable Material	Output Audio
Input1	Input1 embedded audio
Input2	Input2 embedded audio
Input3	Input3 embedded audio
Input4	Input4 embedded audio
Scene	Composite input audio specified in Scene settings
Movie	Mute
Image	Mute
Key	Mute
INTSG	Test tone

Configure the Output Type Settings

You can set the details of the video to output for each type from the list in the Type field of each output.



■ Available output Type

The output Type that can be set varies depending on the output I/F.

The output Types that can be set are marked with a circle "○" in the table below.

		Output I/F			
		SDI	NDI® (Alpha Setting: Disable)	NDI® (Alpha Setting: Enable)	SRT
Available output Type	PGM + DSK	○	○		○
	PGM	○	○		○
	Multi View	○	○		○
	KEY (FILL + SOURCE)			○	
	KEY (FILL)	○			
	KEY (SOURCE)	○			
	IN1	○	○		○
	IN2	○	○		○
	IN3	○	○		○
	IN4	○	○		○

■ Output Types

PGM + DSK : Video of the material selected as PGM Out in Multi View (with DSK display)

PGM : Video of the material selected as PGM Out in Multi View (without DSK display)

Multi View : Multi View video

KEY (FILL + SOURCE) : Key video of both FILL and SOURCE

KEY (FILL) : Key video of FILL alone

KEY (SOURCE) : Key video of SOURCE alone

IN1 : Through video of input source 1

IN2 : Through video of input source 2

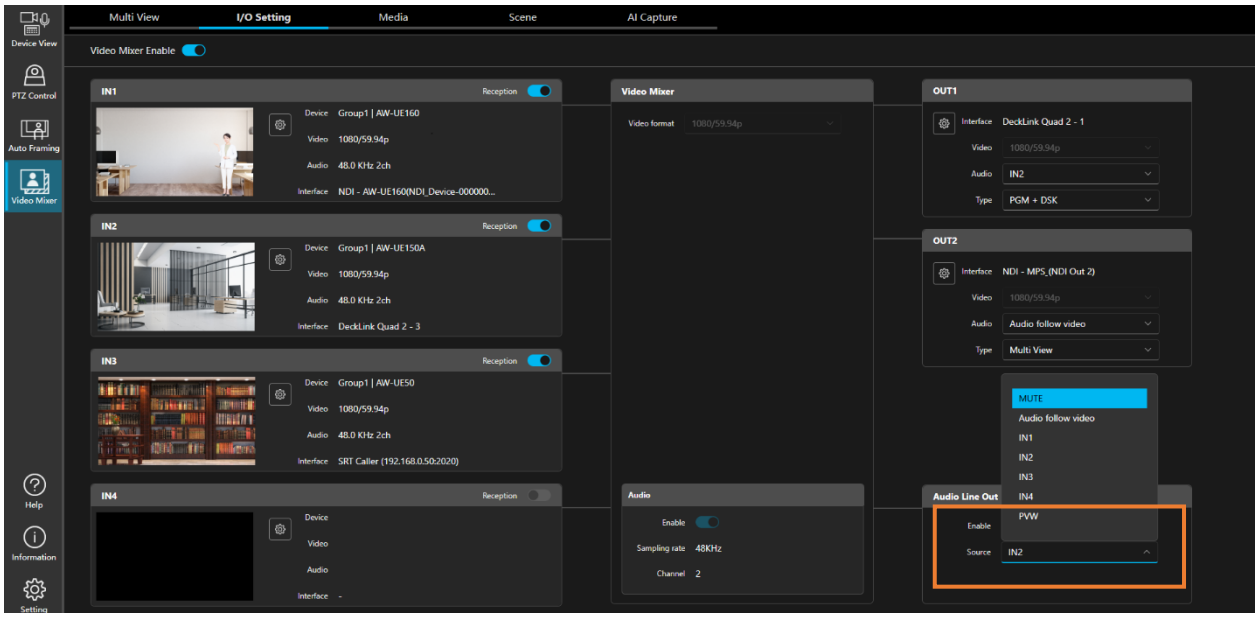
IN3 : Through video of input source 3

IN4 : Through video of input source 4

Configure the Line Out Audio Output Settings

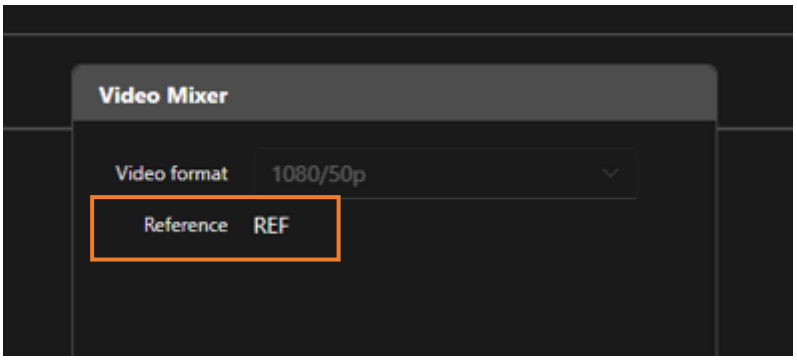
Enable or disable Line out (server PC Line out output) in the Enable field of the Line out settings area.

Select the output audio source in the Source field. For details on sources that can be selected, refer to "Configure the Output Audio Source Settings".



Output reference signal

The output reference signal changes automatically depending on the presence or absence of an SDI board and the input conditions.The current output reference settings is displayed in the Reference field in the system format display area on the I/O Setting screen.



Please refer to the table below for the contents and display conditions of the Reference column.

SDI Board	Reference input and SDI output	SDI input	NDI®/SRT input	Output reference	Reference column display
Exists	Exists *1	—	—	Reference input	REF
Exists	None	Exists	—	SDI input *2	IN1/IN2/IN3/IN4
Exists	None	None	Exists	NDI®/SRT input *3	IN1/IN2/IN3/IN4
Exists	None	None	None	Free run *4	FREE
None	—	—	Exists	NDI®/SRT input *3	IN1/IN2/IN3/IN4
None	—	—	None	Free run *4	FREE

*1: This is only available when there is a reference input, and the Output I/F is specified as SDI.

*2: If there is no reference input, it will output based on the input cycle. If there is an SDI input, the SDI input with the smallest input number will be given priority.

*3: Output is based on the input period of the smallest connected Input number.

*4: If there is no reference period, the internally generated clock is used as the reference.

Registering or Deleting a Movie or Still Image File

You can register a video or still image file on the PC and use it as a video material for this function.

■ File usages

- Assign the file as a video source on the Multi View screen, and output the movie or still image as is.
- Use the file as the background for a scene (composite video) or as a material for PinP.
- Use the file as a material for DSK (static image file only)

■ Available file formats

- Movie file

  MOV, MP4　　*Resolution: 3840x2160 or less

- Still image file

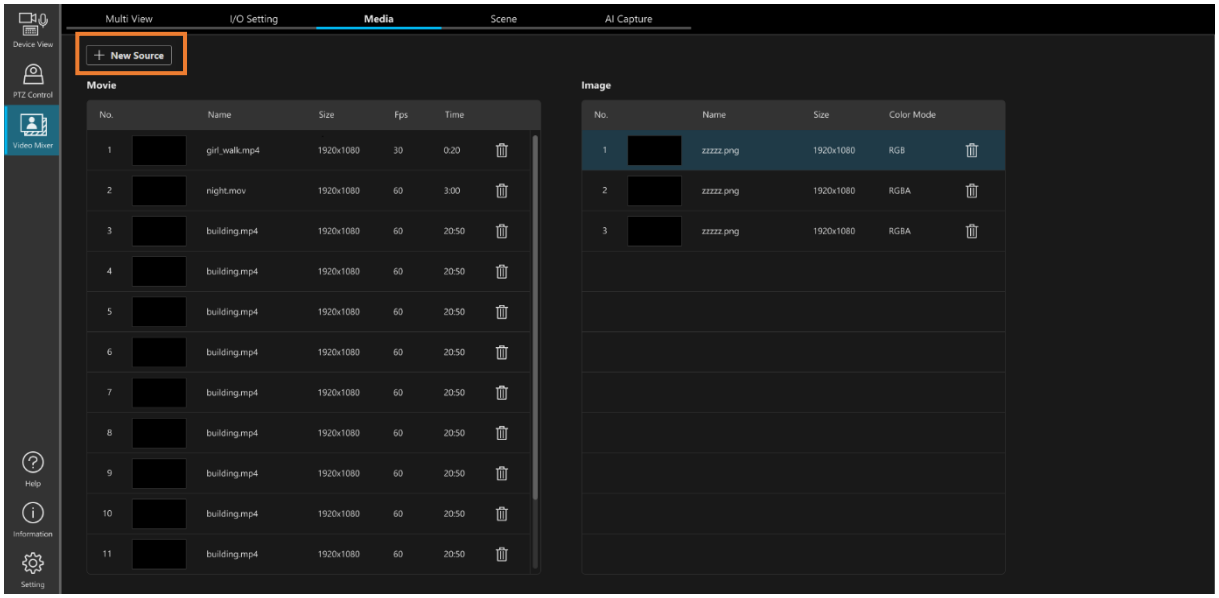
  PNG, JPEG, BMP　　*Resolution: 3840x2160 or less,　Bit depth: 24bit or 32bit

■ File registration procedure

You can register files on the Media screen.

1. Open the Media screen and click the [+ New Source] button.
2. A file selection dialog box opens. Select the movie or still image file to register and click the “Open” button.
3. The file will be copied.

After the completion of copying, information about the files registered will be displayed in the list on the Media screen.



<Notes>

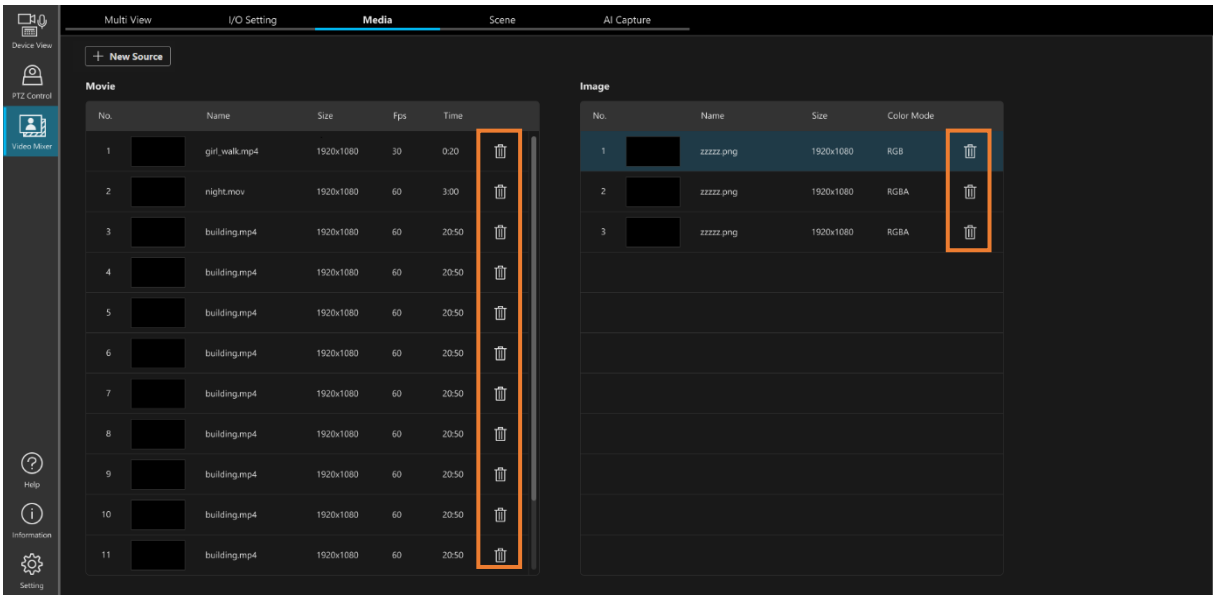
- The original file specified is not used as the movie file or still image file. A copy of the file created in the designated location during registration will be used. Therefore, file copying is performed during registration.
- File registration from a client PC is only supported for Windows. The WebPlugin must be installed on the client PC in advance.

■ File deletion procedure

You can also delete files on the Media screen.

1. Open the Media screen.
2. Click the trash button at the right end of the row of the file you want to delete.

A prompt asking for confirmation that you wish to continue with deletion is displayed. Click YES to delete the file.



<Notes>

- This will delete the file copied to the designated location during registration.
  The original file specified during registration is not deleted.
- The files selected as the PGM Out or Preview target on the Multi View screen cannot be deleted. To delete these files, remove them from PGM Out or Preview on the Multi View screen.

Managing a Scene (Composite Video)

You can register a scene (composite video) consisting of a maximum of four layers and use it as a video material.

■ Specifications of a scene

- Number of layers that can be used

  Maximum four layers

- Available composite materials

  Input source video

  Movie files registered on the Media screen (MOV, MP4)

  Still image files (PNG, JPEG, BMP) registered on the Media screen

- Available composite effects

  PinP

  AI Keying

  Luminance Key

  Color Filter

■ Scene registration

Register a scene on the Scene screen.

*The Scene screen cannot be selected unless the Video Mixer Enable button is turned ON on the IO Setting screen.

1. Open the Scene screen and click the [+ Add] button under Scene Lists on the left of the screen.

   A new scene is added to the list and the new scene setting screen appears.

2. Edit the name of the new scene in the Name field.

   Characters available: Single-byte numbers, single-byte alphabets (upper case, lower case), single-byte space, single-byte symbols _ - ( )

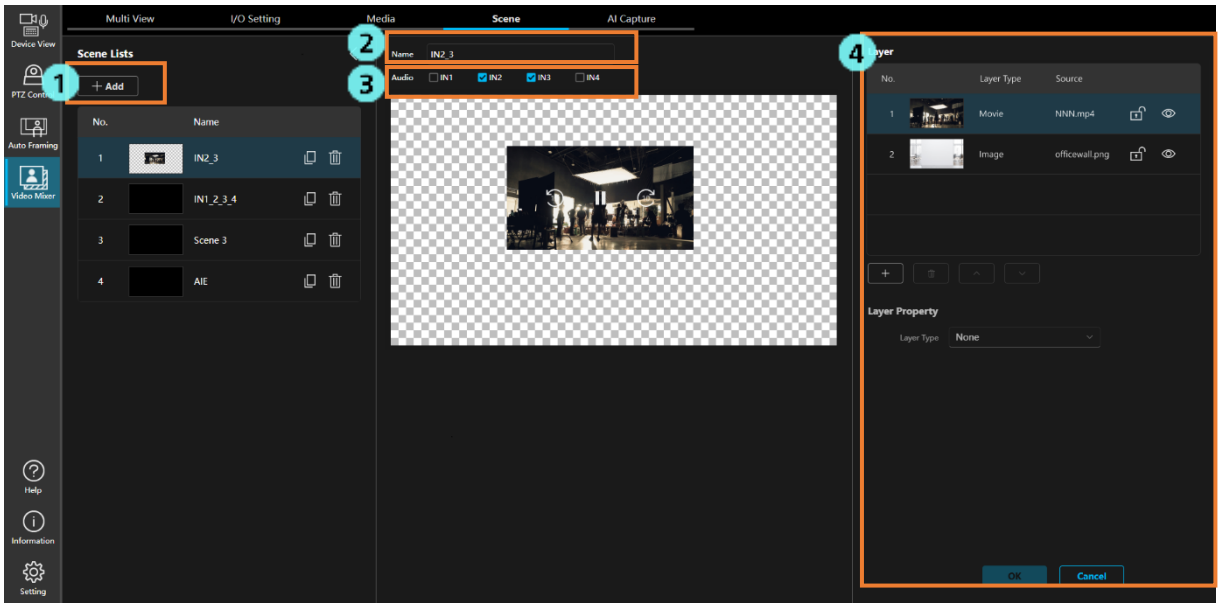
   Number of characters: 1 to 10

3. In the Audio field, select the output audio that will be used when the Scene has PGM out-selected.

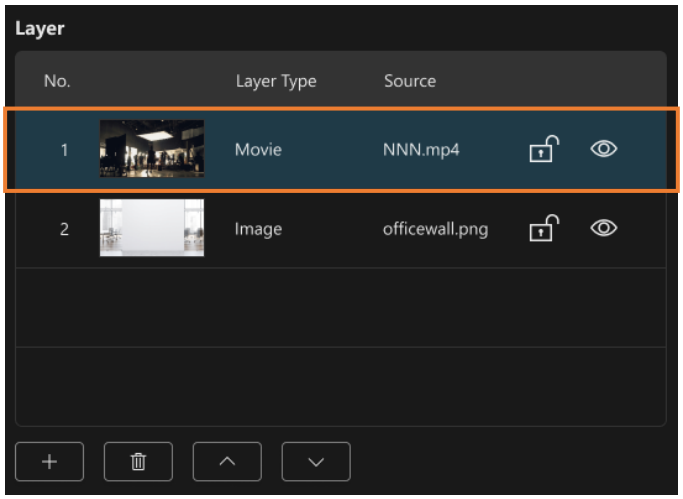
   If multiple inputs are selected, the selected inputs will be simply combined to compose an embedded audio.

   *Volume balance cannot be configured, so make changes to the input audio level.

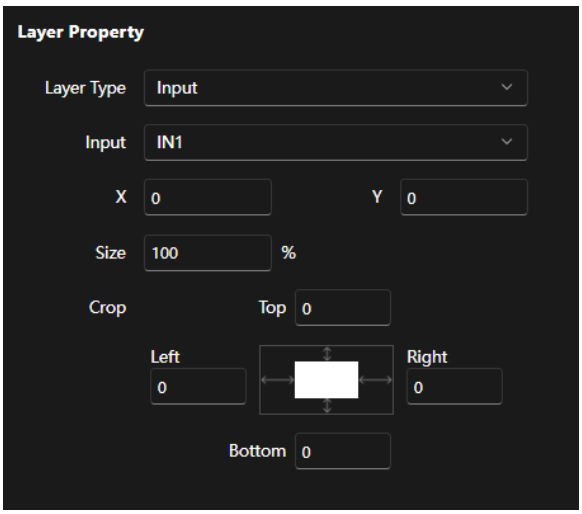
4. Configure the settings for each layer in the Layer settings field on the right of the screen.



3-1. In the layer management area (figure below), click and select the row of the layer you want to set. (If a new scene is added, there is only one layer, which is already selected.)



3-2. In the layer property area (figure below), configure the layer settings.



In the Layer Type field, select the type of the layer.

You can select from the following. The settings you can make differ according to the selected Layer Type.

None: No effect (Same as the state when no layer exists.)

Input: The input source video is displayed.

Movie: The movie file registered on the Media screen is displayed.

Image: The still image file registered on the Media screen is displayed.

AI Keying: Only the subject isolated from the video of the specified input source is displayed.

Lum Key: Areas with a specific degree of luminance in the video of the specified input source is displayed as transparent.

Color Filter: The filter effect in the specified color is applied to the entire screen and displayed.

AI Effect Filter: Human faces are detected using AI, have effects applied to them in real time and displayed.

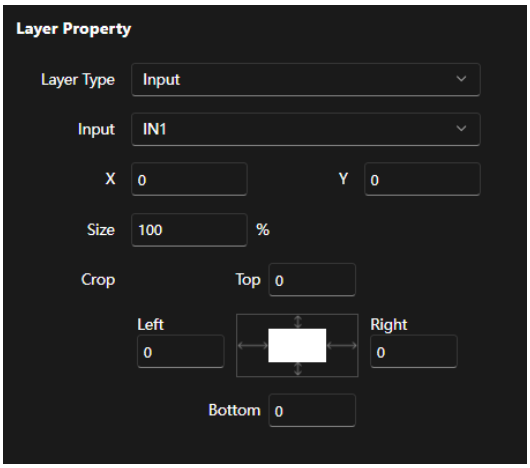
AI Face Crop: Faces are detected in a specified input source using AI, cropped and displayed.

Internal SG:The Colorbar is displayed.

<Limitations>

- A Movie layer can only have up to two layers set in a single scene.
- An AI Keying / AI Effect Filter / AI Face Crop layer can only have one layer in each scene.

When the Layer Type is Input



Input: Select the input source you want to use.

X: It sets the horizontal display position of the layer in coordinates with the top left corner of the screen as the origin.

Setting is possible within the range of the screen size determined in the system format.

When the system format is 1080/*: -1919 to 1919

When the system format is 720/*: -1279 to 1279

Y: It sets the vertical display position of the layer in coordinates with the top left corner of the screen as the origin.

Setting is possible within the range of the screen size determined in the system format.

When the system format is 1080/*: -1079 to 1079

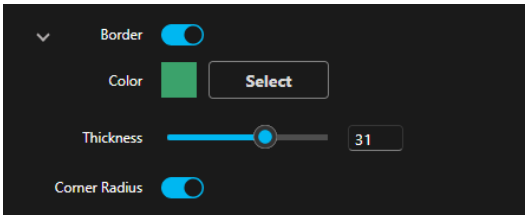
When the system format is 720/*: -719 to 719

Size: It sets the display size of the layer as a percentage of the entire screen (1 to 100).

Crop: It sets the crop amount for the layer in the up, down, left, and right directions.

Set the crop amount for the screen size when the size is 100% (when the system format is 1080/*: 1920 x 1080, when the system format is 720/*: 1280 x 720).

* In the X, Y, Size, and Crop text boxes, values can be adjusted in steps of 1 by dragging with the mouse or by scrolling the mouse wheel up or down. While holding down the Shift key, values can be adjusted in steps of 10.



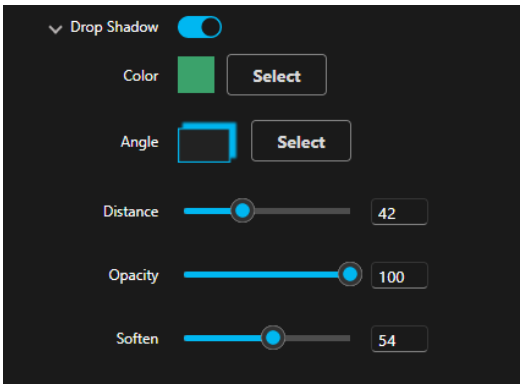
Border: Set whether the border around the outer edge of the layer is displayed.

Clicking the arrow to the left of Border expands the following setting parameters.

Color: Click the Select button to configure the border color.

Thickness: Configure the border thickness using the slider or by directly entering a value.

Corner Radius: Configure the roundness of the border corners.

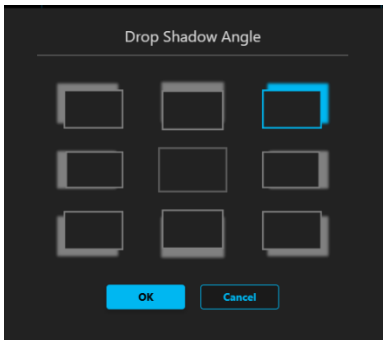


Drop Shadow: Set whether the drop shadow of the layer is displayed.

Clicking the arrow to the left of Drop Shadow expands the following setting parameters.

Color: Click the Select button to configure the shadow color.

Angle: Click the Select button to configure the shadow direction.



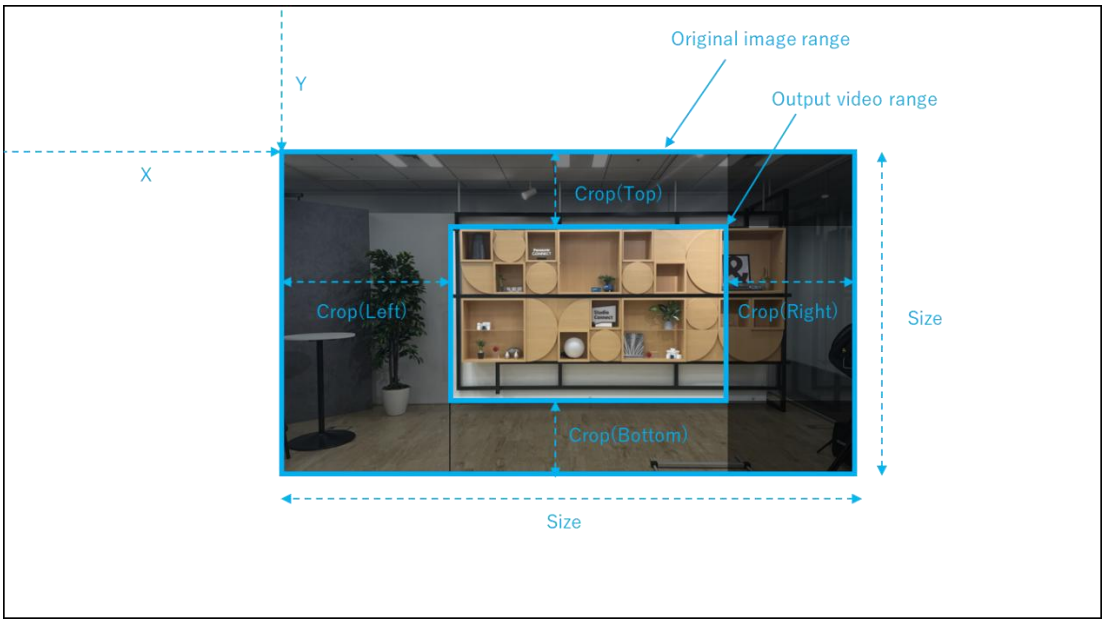
Distance: Configure the distance of the shadow from the layer using the slider or by directly entering a value.

Opacity: Configure the opacity of the shadow using the slider or by directly entering a value.

Soften: Configure the amount of shadow blur using the slider or by directly entering a value.

The relationship between the settings of X, Y, Size, Crop and the video that is output is as shown in the figure below.

The output video range is the range of the actually output video.

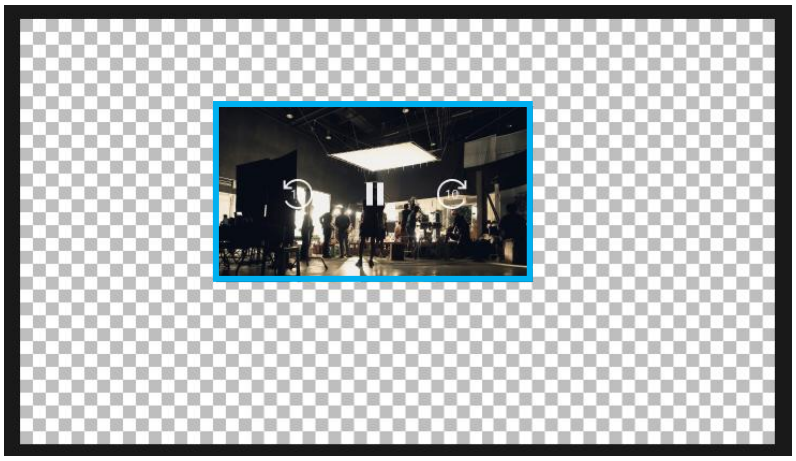


X, Y, and Size can also be set on the video display.

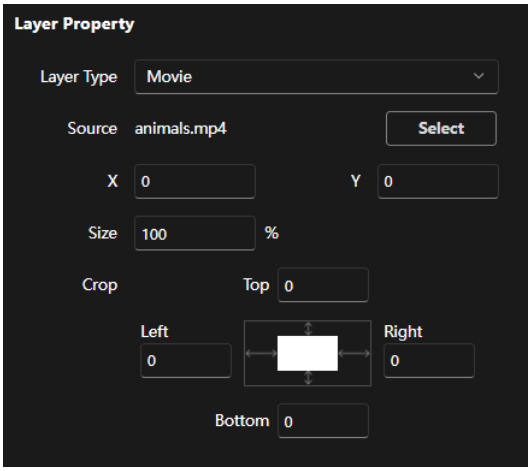
X, Y, and Size can be set by operating the blue frame that appears on the outer circumference of the layer being set.

Change position by dragging the blue frame: X, Y settings

Change size by clicking a corner of the blue frame and dragging: Size settings



When the Layer Type is Movie



Source: Click the Select button to select the movie file you want to use.

The movie file must be registered in advance on the Media screen.

For details, refer to "Registering or Deleting a Movie or Still Image File".

X, Y: Same as when the Layer Type is Input.

Size: It sets the display size of layers by its ratio (1 to 300%) to the size (vertical and horizontal resolution) of the movie file you want to use.

Crop: It sets the crop amount for the layer in the up, down, left, and right directions.

Set the crop amount according to the size (vertical and horizontal resolution) of the movie file you want to use.

* In the X, Y, Size, and Crop text boxes, values can be adjusted in steps of 1 by dragging with the mouse or by scrolling the mouse wheel up or down. While holding down the Shift key, values can be adjusted in steps of 10.

Border, Color, Thickness, Corner Radius: Same as when the Layer Type is Input.

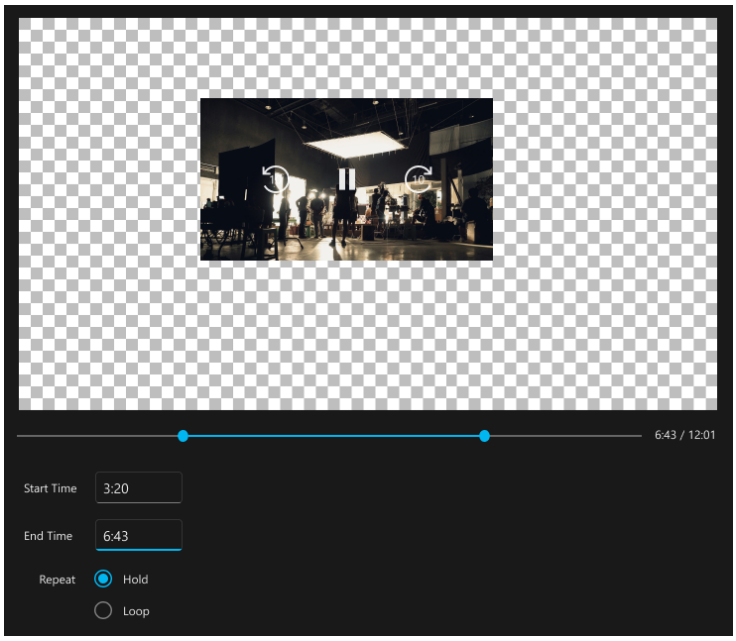
Drop Shadow, Color, Angle, Distance, Opacity, Soften: Same as when the Layer Type is Input.

When the Layer Type is Movie, the video is displayed as shown below, and you can configure the playback settings for the movie file.

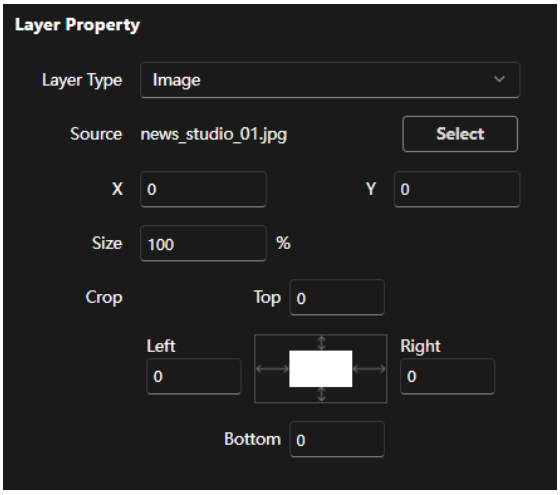
Start Time: Drag the left knob on the slider to set the position where the movie playback starts.

End Time: Drag the right knob on the slider to set the position where the movie playback ends.

Repeat: You can set whether to play back the movie only once or play it back in a loop.



When the Layer Type is Image



Source: Click the Select button to select the still image file you want to use.
The still image file must be registered in advance on the Media screen.
For details, refer to "Registering or Deleting a Movie or Still Image File".

X, Y: Same as when the Layer Type is Input.

Size: It sets the display size of layers by its ratio (1 to 300%) to the size (vertical and horizontal resolution) of the still image file you want to use.

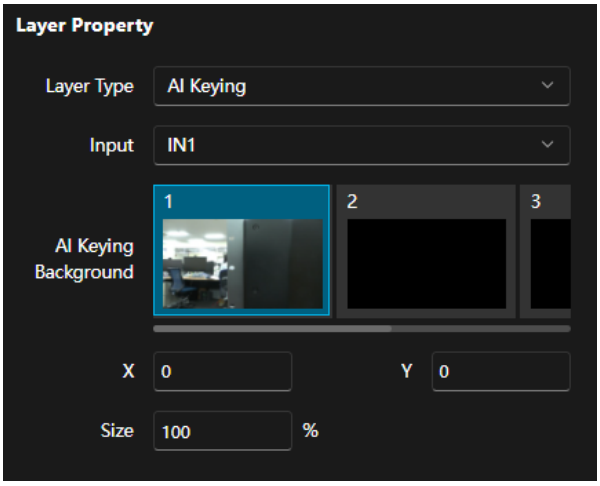
Crop: It sets the crop amount for the layer in the up, down, left, and right directions.
Set the crop amount according to the size (vertical and horizontal resolution) of the still image file you want to use.

* In the X, Y, Size, and Crop text boxes, values can be adjusted in steps of 1 by dragging with the mouse or by scrolling the mouse wheel up or down. While holding down the Shift key, values can be adjusted in steps of 10.

Border, Color, Thickness, Corner Radius: Same as when the Layer Type is Input.

Drop Shadow, Color, Angle, Distance, Opacity, Soften: Same as when the Layer Type is Input.

When the Layer Type is AI Keying



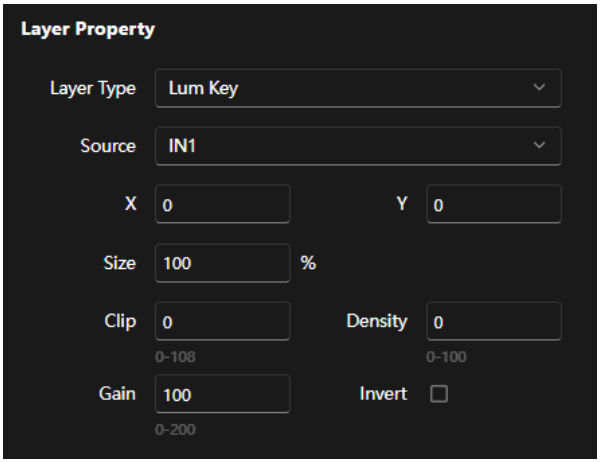
Input: Select the input source you want to use.

AI Keying Background: From the AI Keying Background images captured on the AI Capture screen, select the image you want to use as the background image.

X, Y, Size: Same as when the Layer Type is Input.

* For details on AI Keying and the necessary settings, refer to "Configure the AI Keying Settings".

When the Layer Type is Lum Key



Input: Select the input source you want to use.

X, Y, Size: Same as when the Layer Type is Input.

Clip: This setting determines the range of valid key signals with a value from 0 to 108.
(0: Valid at all levels, 108: Invalid at all levels)

Gain: This setting determines the degree of key gain. (0: x0.0 to 100: x10.0 to 200: x20.0)

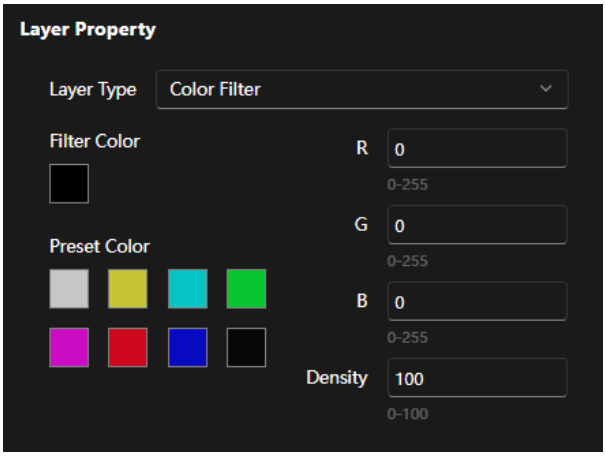
Density: This setting determines the key density. (0: 0% to 100: 100%)

Invert: Turn this setting ON to invert key signals.

* In the Clip, Gain, and Density text boxes, values can be adjusted in steps of 1 by dragging with the

mouse or by scrolling the mouse wheel up or down. While holding down the Shift key, values can be adjusted in steps of 10.

When the Layer Type is Color Filter



R, G, B: Set the RGB value of the color you want to use as the filter in the range of 0 to 255.

Density: Set the transparency of the color in the range of 0 (high transparency) to 100 (low transparency).

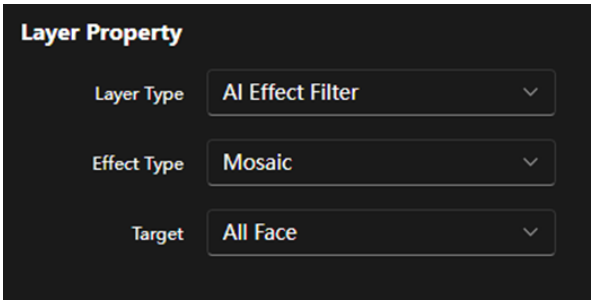
Filter Color: The color set in R, G, B, and Density is displayed.

Preset Color: There are eight preset colors.

If you click each color, values in the R, G, and B fields change to the values of the clicked color.

* In the R, G, B, and Density text boxes, values can be adjusted in steps of 1 by dragging with the mouse or by scrolling the mouse wheel up or down. While holding down the Shift key, values can be adjusted in steps of 10.

When the Layer Type is AI Effect Filter



*The settings for AI Effect Filter will change according to the selected settings.

Shared settings are as follows.

Effect Type ： Select the type of effect to apply. You can select from the following.

The type of effect applied will change depending on the selected Effect Type.

Blur: This will blur a person’s face.

Mosaic: This will apply a mosaic to a person’s face.

Image: This will add a still image to a person’s face.

Target : Select the effect application mode. You can select from the following.

All Face: Applies the effect to all persons.

Selected Face: Only selected persons have the effect applied.

Unselected Face: Only unselected persons have the effect applied.

When the Layer Type is AI Effect Filter, the effect settings area is displayed at the bottom of the video display area, allowing you to configure detailed effect settings.

The detailed effect settings have different items that can be set depending on the Effect Type and Target settings, as follows.

Pattern 1 : When Effect Type is Blur or Mosaic and Target is All Face

Size: Set the size of the area the effect will be applied to.

Drag the knob on the slider to set the size of the effect.

Strength: Choose the strength of effect.

Drag the knob on the slider to set the strength (1 to 4) of the effect.

You can also set it by entering a value into the text box.

Pattern 2 : When Effect Type is Blur or Mosaic and Target is Selected Face or Unselected Face

Selected Face : Select people to apply effects to or not apply effects to from the data registered in the face database. You can select up to eight people.

*For details, refer to “Configure the AI Effect Filter Settings”.

Size: Set the size of the area the effect will be applied to.

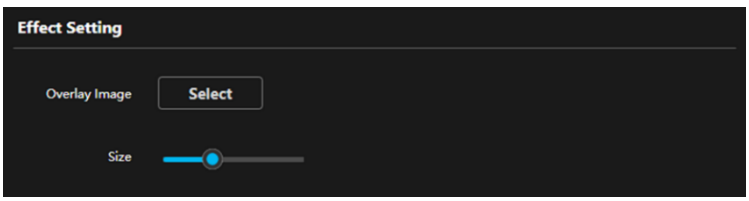
Drag the knob on the slider to set the size of the effect.

Strength : Choose the strength of effect.

Drag the knob on the slider to set the strength (1 to 4) of the effect.

You can also set it by entering a value into the text box.

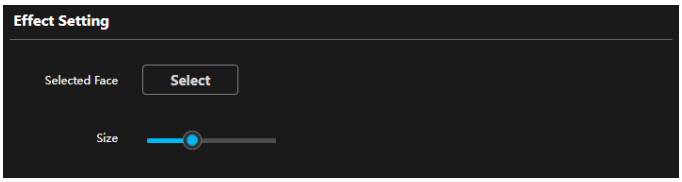
Pattern 3 : When Effect Type is Image and Target is All Face



Overlay Image: Select the still image file you want to add.
The still image file must be registered in advance on the Media screen.
*For details, refer to "Registering or Deleting a Movie or Still Image File".

Size: Set the size of the area the effect will be applied to.
Drag the knob on the slider to set the size of the effect.

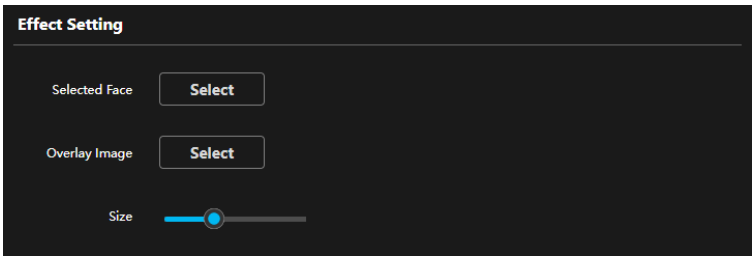
Pattern 4 : When Effect Type is Image and Target is Selected Face



Selected Face : Select persons who you want the still image added to from the data registered in the face database as well as the still image file. You can select up to eight people.
*For details, refer to "Configure the AI Effect Filter Settings".
The still image file must be registered in advance on the Media screen.
*For details, refer to "Registering or Deleting a Movie or Still Image File".

Size: Set the size of the area the effect will be applied to.
Drag the knob on the slider to set the size of the effect.

Pattern 5 : When Effect Type is Image and Target is Unselected Face



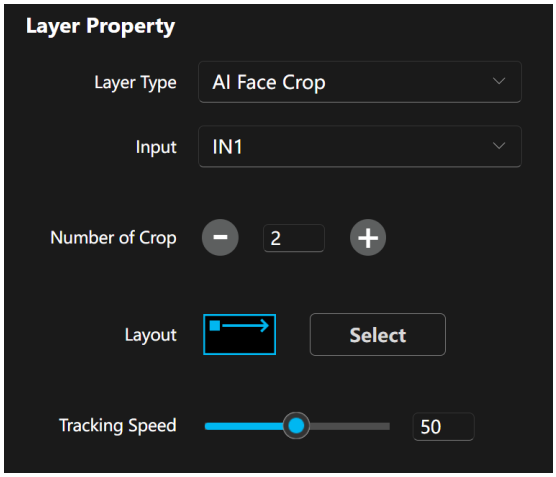
Selected Face : Select people do not apply effects to from the data registered in the face database. You can select up to eight people.
*For details, refer to "Configure the AI Effect Filter Settings".

Overlay Image: Select the still image file you want to add.
The still image file must be registered in advance on the Media screen.
*For details, refer to "Registering or Deleting a Movie or Still Image File".

Size: Set the size of the area the effect will be applied to.
Drag the knob on the slider to set the size of the effect.

When the Layer Type is AI Face Crop

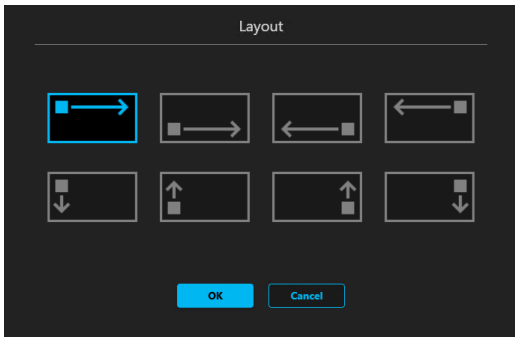
*For details on the setting procedure, refer to "Configure the AI Face Crop Settings".



Input: Select the input source you want to use.

Number of Crop: Either use the plus and minus buttons or enter a value directly to set the number of crop frames from one to eight.

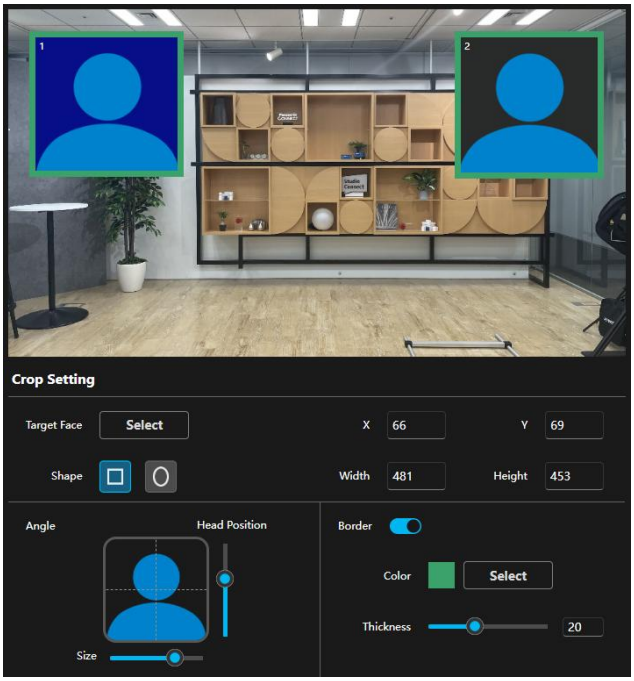
Layout: Click the Select button to select the crop frame layout.



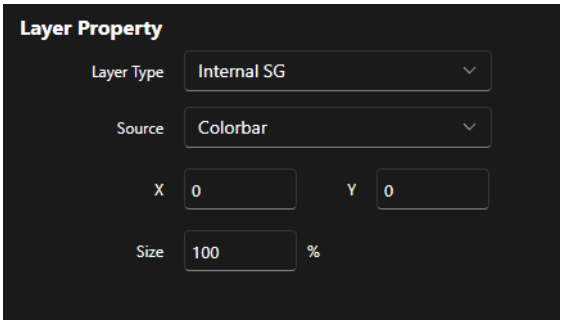
The Crop display frames are automatically laid out in the number of display frames set in Number of Crop, following the direction of the arrow (→) from the display frame origin (■) of the selected Layout setting.

Tracking Speed: By using the slider or entering a value, you will be able to set the tracking speed for movement of the subject's face from one to 100.

When the Layer Type is AI Face Crop, the video is displayed as shown below, and you can configure the detailed settings for the crop frame. *For setting items and details on the setting procedure, refer to "Configure the AI Face Crop Settings".



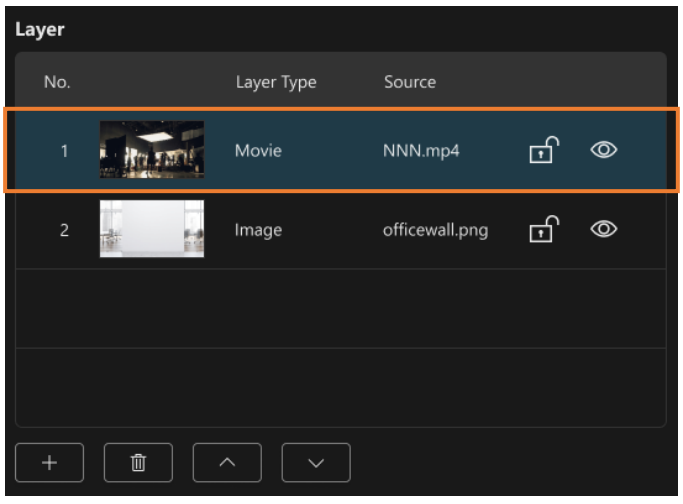
When the Layer Type is Internal SG



Source：You can select Colorbar or Colorbar (moving).

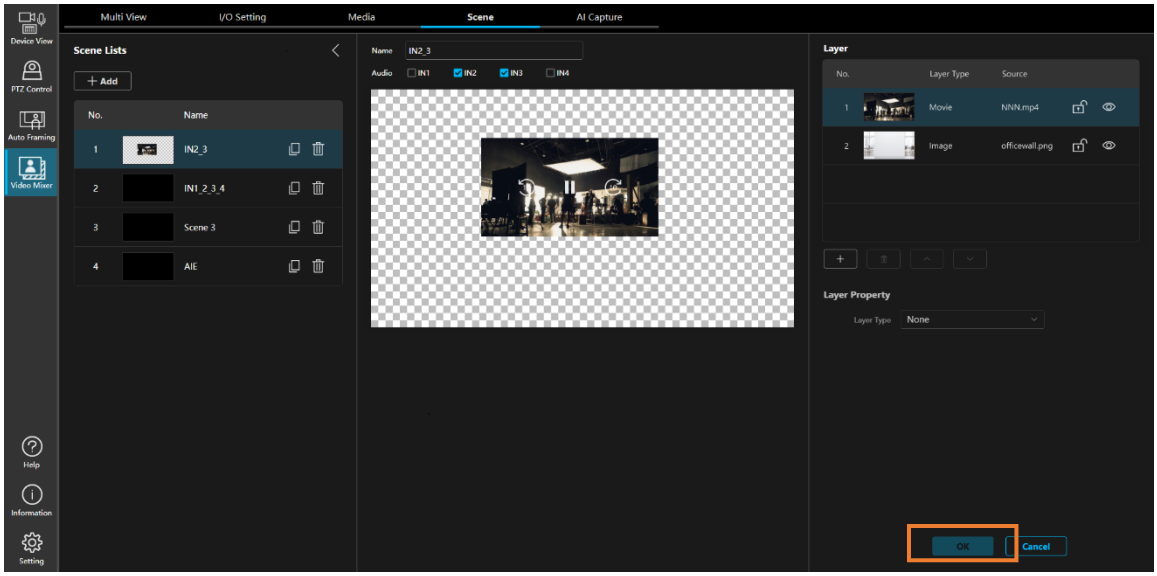
X, Y, Size：Same as when Layer Type is Input.

3-3. If you want to add a layer, click the + button at the bottom left of the layer management area (figure below).
Repeat step 3-2 to configure the layer settings.
Unnecessary layers can be deleted by clicking the trash button at the bottom left of the layer management area.



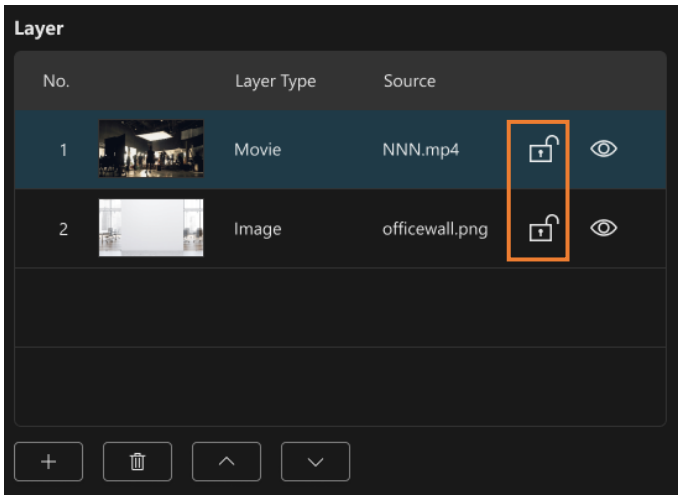
3-4. You can re-arrange the order of layers. To re-arrange a layer, select the layer that you want to re-arrange and click the up and down arrow buttons at the bottom left of the layer management area.
The No. 1 layer is the front layer and the No. 4 layer is at the back.

3-5. To confirm the layer settings, click the OK button at the bottom right of the Scene screen.
The settings will be confirmed and reflected in the Scene Lists on the left side of the Scene screen.

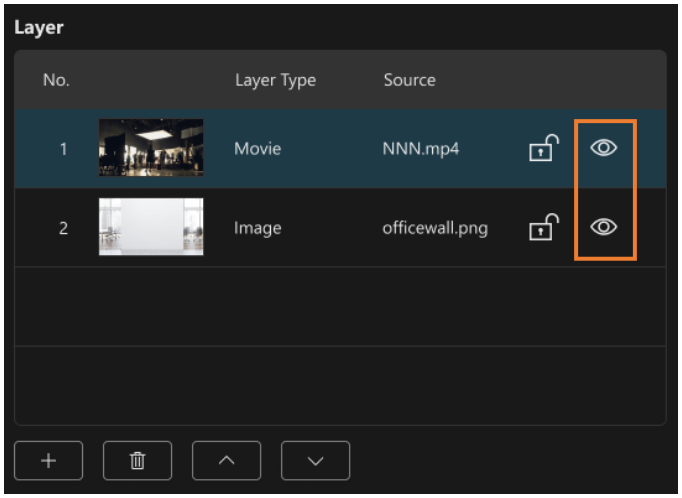


<Notes>

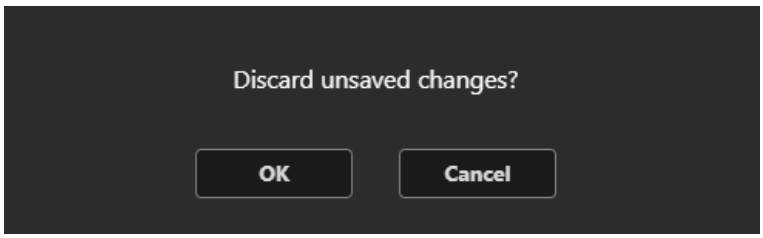
・To lock/unlock layer settings, click the padlock icon for each layer setting in the layer management area. Layer settings cannot be changed when the lock is ON.



・To enable/disable layer settings, click the eye icon for each layer setting in the layer management area. Disabled layer settings are ignored in the compositing process.



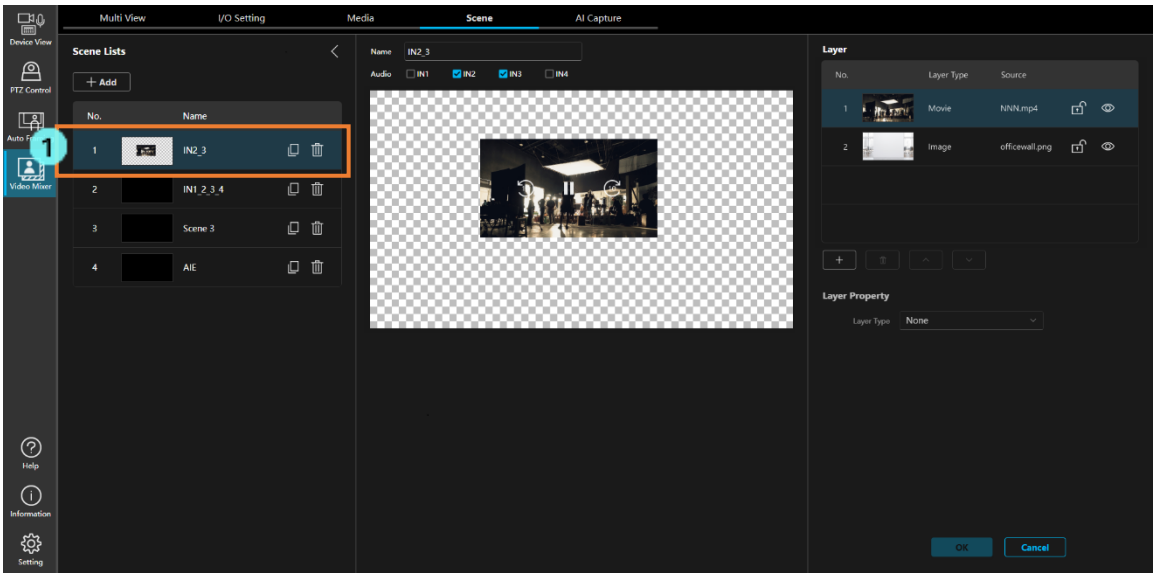
・If you select another screen or the Scene list when the Scene data is unsaved, a confirmation dialog will be displayed.If you do not need to save, click "OK" to discard the changes and move to the next screen.If you want to save, click "Cancel" and you will be returned to the Scene screen, where you can click the OK button at the bottom right of the Scene screen to save.



■ Scene editing

To edit a scene that is already registered, follow the procedure below.

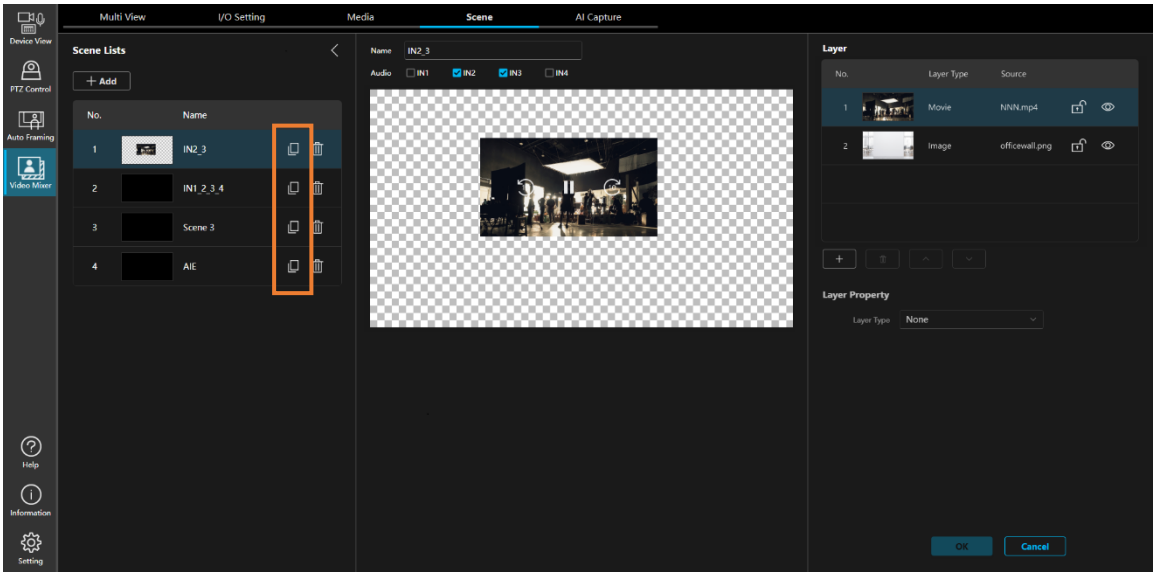
1. Click the scene you want to edit in the Scene Lists on the left of the screen.
2. Configure the name and layer settings of the scene by following the same steps (2 and onward) as in scene registration.



■ Scene copying

You can copy the settings of an already-registered scene and add it as a new scene.

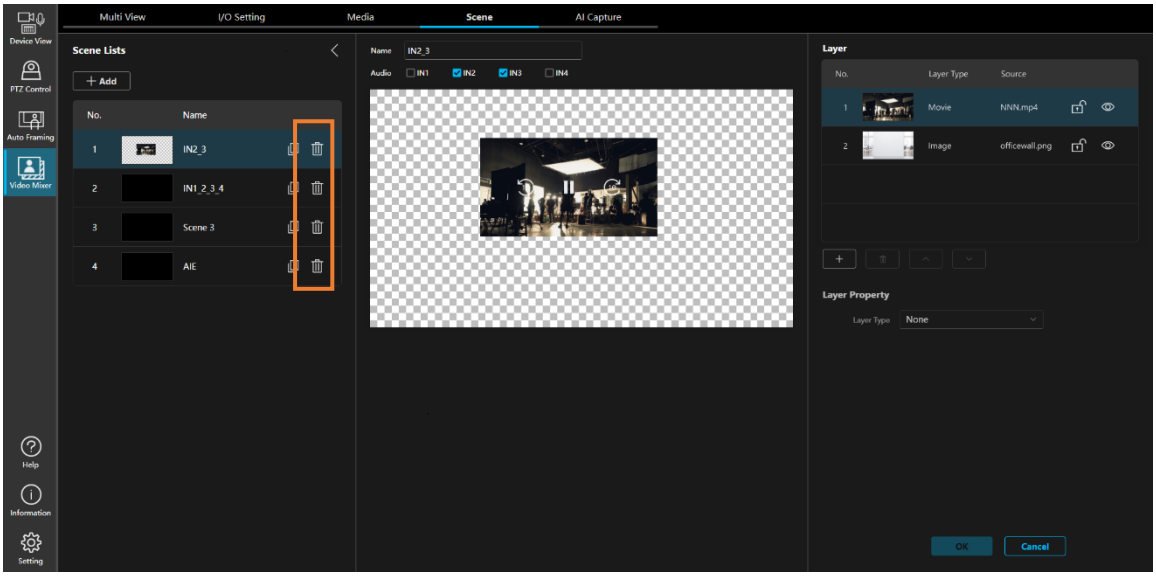
To copy and add a scene, click the copy button for the scene you want to copy in the Scene Lists on the left of the screen.



■ Scene deletion

To delete a scene that is already registered, click the trash button for the scene to delete in the Scene Lists on the left of the screen.

A confirmation message is displayed. Click YES to delete the scene.



Configure the AI Keying Settings

AI Keying is a function that uses AI to isolate an element of a video from its background.
With the help of this function, the chroma key effect can be easily achieved without the need for a green screen or special lighting.
By setting AI Keying as a special effect in one of the layers constituting the scene (composite video), the isolated subjects can be composited onto videos from other input sources and movie files.

■ AI Keying limitations

Since AI Keying uses background subtraction for AI processing, the following limitations are applicable.

- The camera position (angle of view) needs to be fixed.
- A background image (AI Keying Background image) without the subject needs to be taken in advance with the camera position fixed.

■ About the AI Keying Background images

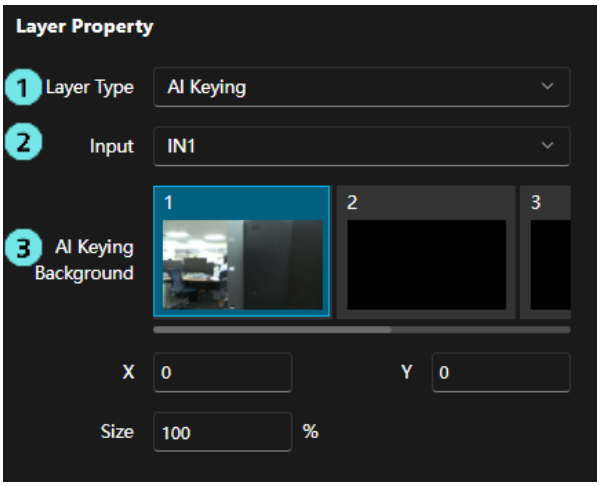
- Up to four AI Keying Background images numbered 1 to 4 can be saved. When setting AI Keying in a layer of the scene (composite video), select which one of the saved background images 1 to 4 to use.
- If the camera is a Panasonic PTZ camera, the camera position and focus position * is also saved and will be loaded when the scene is selected.

*If the camera is set to Auto Focus, the focus position will not be recalled when selecting a scene.

■ AI Keying setting procedure 1 (setting a scene)

* For details on this procedure, also refer to "Managing a Scene (Composite Video)".

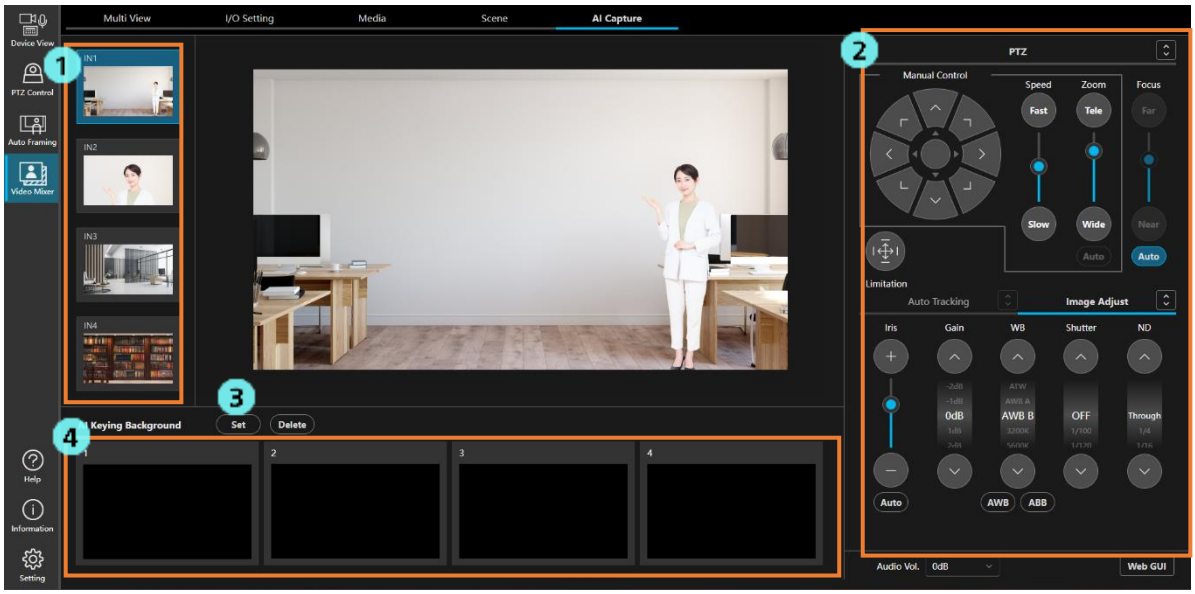
1. Open the Scene screen, and in Layer Type under the Layer settings, select AI Keying.
2. In Input under the Layer settings, select the input source you want to use.
3. In AI Keying Background under the Layer settings, select the image number you want to use.



■ AI Keying setting procedure 2 (AI Keying Background image capture)

*The AI Capture screen cannot be selected unless the Video Mixer Enable button is turned ON on the IO Setting screen.

1. In the input source field on the left of the AI Capture screen, click and select the input source you want to use (the source selected in step 2 of “AI Keying setting procedure 1” above) (turns blue).
2. Set the input source (camera) position.
   If the input source is a Panasonic PTZ camera, it is possible to adjust the camera position performing the Pan/Tilt/Zoom operations of the camera in the PTZ operation area of the AI Capture screen.
   If the input source is other than a Panasonic PTZ camera, adjust the camera position by directly operating each input source.
3. Click and select the Set button in the AI Keying Background field at the bottom left of the screen (turns blue).
4. In the AI Keying Background field at the bottom left of the screen, click the thumbnail of the save-destination image number of the capture image (the image number selected in step 3 of “AI Keying setting procedure 1” above).
   If capture is performed successfully, the thumbnail image will be updated.



■ If it is necessary to re-capture the AI Keying Background image

If the changes described below occur in the filming conditions, repeat “AI Keying setting procedure 2” described above, and re-capture the AI Keying Background image. If re-capture is not performed, objects other than the subject may be isolated, or other problems may occur with the isolation operation.

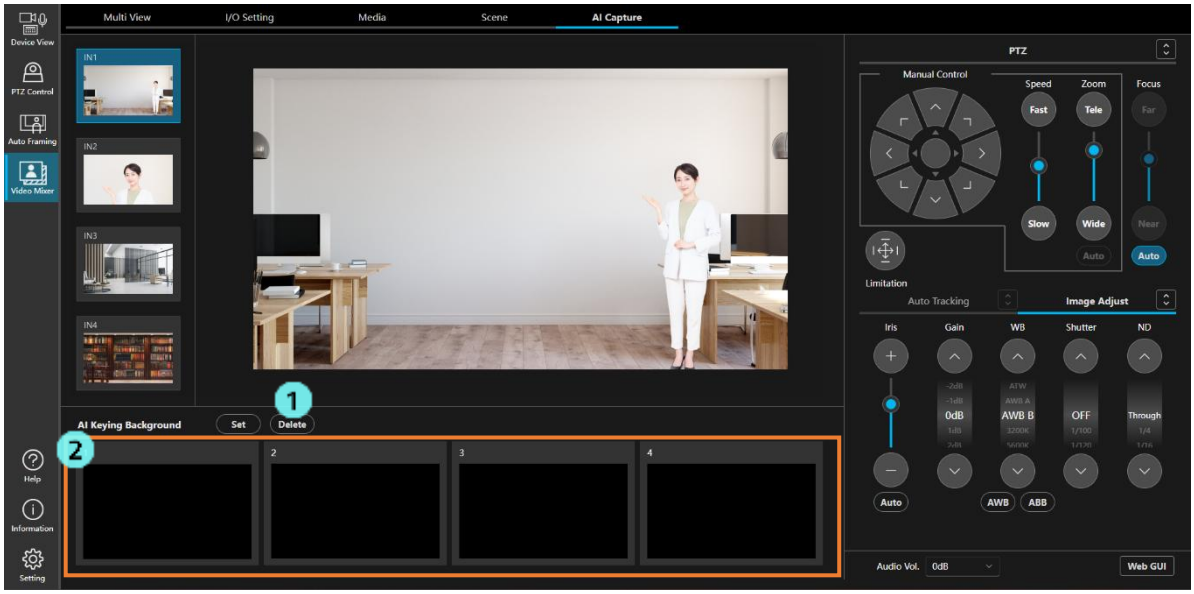
It may be necessary to perform re-capture in the following cases.

- The camera position (angle of view) changes.
- A part of the background changes.
- The conditions of lighting or sunlight change (the shadow and color tone changes).

■ AI Keying Background image deletion

You can delete an AI Keying Background image by following the procedure below.

1. Click and select the Delete button (turns blue) in the AI Keying Background field at the bottom left of the screen.
2. Click the thumbnail display part of the AI Keying Background image you want to delete to delete it.



■ AI Keying limitations

There are a number of limitations when performing a PGM selection of AI layers, including AI Keying.

Ensure that you understand the limitations before using.

For details, refer to “AI Layer Limitations”.

Configuring the AI Effect Filter Settings

AI Effect Filter is a function that uses AI to detect people in the video and apply an effect to them.
By setting AI Effect Filter as a special effect in one of the layers constituting the scene (composite video), the effect can be applied to the faces of the detected subjects in videos from other input sources and movie files.
Additionally, combined with facial recognition, you can choose to apply or not to apply an effect to a person whose face is registered in the face database beforehand.

■ Precautions when shooting with AI Effect Filter

Ensure that you understand the following AI Effect Filter precautions before using.

- While there is no need to fix the camera position (angle of view), fixing it will stabilize operation.
- When using the facial recognition function, it will be easier for a face to be recognized if it is shot from an angle similar to the one used in the photo registered in the face database.

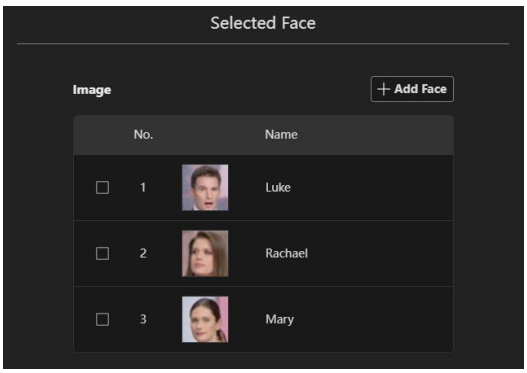
■ AI Effect Filter facial recognition setting procedure

* For details on this procedure, also refer to "Managing a Scene (Composite Video)".

1. Open the Scene screen, and in Layer Type under the Layer settings, select AI Effect Filter.
2. In Effect Type under the Layer settings, select the effect type you want to use.
3. In Target under the Layer settings, select the effect application mode you want to use.
4. Click the Layer Setting's Select button.

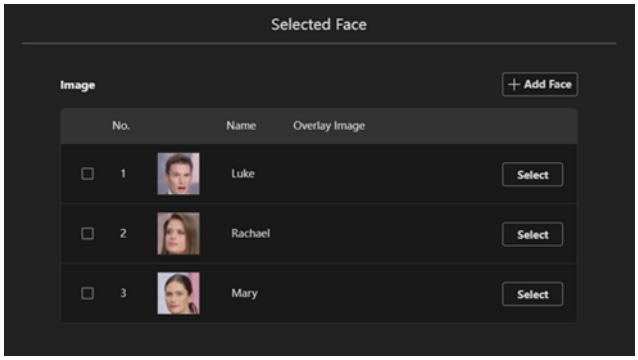
*Setting procedures will change in the following cases according to the Effect Type and Target settings.

Pattern 1: When the Effect Type in the Layer Settings is Mosaic or Blur, or when the Effect Type is Image and the Target is Unselected Face



If Target is Selected Face, select the subject to which the effect will be applied, if Target is Unselected Face, select the subject to which the effect will not be applied.
Click the Select button to display the list of subjects registered in the face database, and check the checkbox for the subject. (Up to eight people can be selected)
*The subject must be registered in the face database in advance.
For details, refer to "Configure the Face Database Settings".

Pattern 2: When Effect Type for Layer Settings is Image, and Target is set to Selected Face



Select the subject you want to add a still image to, and the still image file you want to add.

1. Check the checkbox for the subject you want to add a still image to. (Up to eight people can be selected)

   *The subject must be registered in the face database in advance.

   For details, refer to "Configure the Face Database Settings".

2. Click the Select button and individually set the still image to be added to the subject.

   *The still image file must be registered in advance on the Media screen.

   For details, refer to "Registering or Deleting a Movie or Still Image File".

■ AI Effect Filter limitations

There are a number of limitations when performing a PGM selection of AI layers, including AI Effect Filter.

Ensure that you understand the limitations before using.

For details, refer to "AI Layer Limitations".

Configuring the AI Face Crop Settings

AI Face Crop is a function that uses AI to recognize faces in the video and then display them cropped out (Crop display) in real time from the rest of the video.
By setting AI Face Crop as a special effect in one of the layers constituting the scene (composite video), the cropped image can be composited onto videos from other input sources and movie files.

■ Precautions when shooting with AI Face Crop

Ensure that you understand the following AI Face Crop precautions before using.

- If you are not going to fix the camera position (angle of view), the cropped image will be unstable.
- If the feature of the subject is small, they may not have a crop frame assigned.
- When using the facial recognition function, it will be easier for a face to be recognized if it is shot from an angle similar to the one used in the photo registered in the face database.

■ How to set AI Face Crop 1

Configure the settings for each Layer Property item.
* For details on this procedure, also refer to "Managing a Scene (Composite Video)".

1. Open the Scene screen, and in Layer Type under the Layer settings, select AI Face Crop.
2. In Input under the Layer settings, select the input source you want to use.
3. Set the number of crop frames in the Layer Setting's Number of Crop.
4. Select the crop frame layout from the Layer Setting's Layout.
5. Set the tracking speed for movement of the subject's face from the Layer Setting's Tracking Speed.

Proceed to "How to set AI Face Crop 2" for detailed settings for each crop frame.

■ How to set AI Face Crop 2

You can configure the detailed settings for each crop in the Crop Setting area.

- Crop display frame individual settings

1. In the video display area (shown below), click and select the crop frame you want to set.

・How to switch crop frame selections

1. Click the selected crop frame to unselect it.
2. Click and select the crop frame you want to configure.

2. You can configure crop frame settings in the Crop Setting area (shown below).

Target Face: Click the Select button and select the face image for the subject that the crop frame will be applied to.

* The face image must be registered in advance in the face database.
For details, refer to "Configure the Face Database Settings".

Shape: Click the square or ellipse button to configure the shape of the crop frame.

X: It sets the horizontal display position of the crop frame in coordinates with the top left corner of the screen as the origin.

Setting is possible within the range of the screen determined in the system format.

・When the system format is 1080/*

Min: 0 Max: Value resulting from crop frame width subtracted from 1920

・When the system format is 720/*

Min: 0 Max: Value resulting from crop frame width subtracted from 1280

Y: It sets the vertical display position of the crop frame in coordinates with the top left corner of the screen as the origin.

Setting is possible within the range of the screen determined in the system format.

・When the system format is 1080/*

Min: 0 Max: Value resulting from crop frame height subtracted from 1080

・When the system format is 720/*

Min: 0 Max: Value resulting from crop frame height subtracted from 720

Width: It sets the width of the crop frame.

Setting is possible within the range of the screen determined in the system format.

・When the system format is 1080/*

Min: 50 Max: 1920

・When the system format is 720/*

Min: 33 Max: 1280

Height: It sets the height of the crop frame.

・When the system format is 1080/*

Min: 55 Max: 1080

・When the system format is 720/*

Min: 37 Max: 720

* In the R, G, B, and Density text boxes, values can be adjusted in steps of 1 by dragging with the mouse or by scrolling the mouse wheel up or down. While holding down the Shift key, values can be adjusted in steps of 10.

X, Y, Width and Height can also be set on the video display.

X, Y, Width and Height can be set by operating the inside portion and outer frame of the crop frame.

・Change position by clicking the inside of the crop frame and dragging and dropping it: X, Y settings

・Change size and shape by dragging the outer frame: Width, Height settings

Angle: The Head Position and Size settings will be reflected in the size and position of the human figure icon.

Head Position: Configure the face height with the slider.

Size: Configure the face size with the slider.

Border: Use the Border button to turn on or off the border around the crop frame.

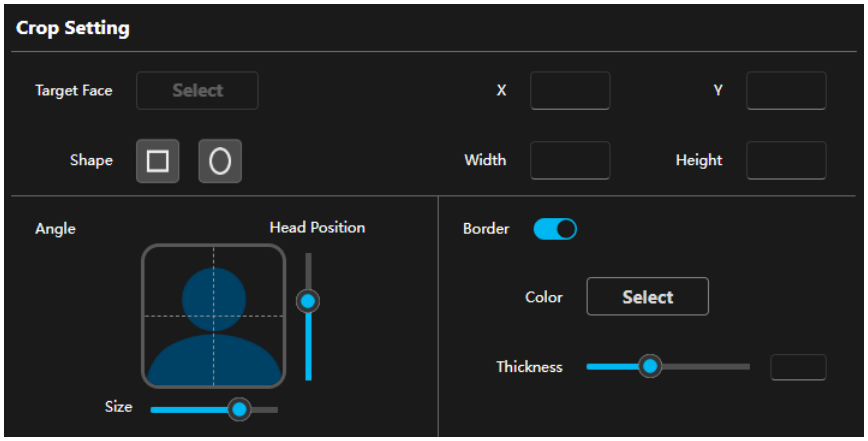
Color: Click the Select button to configure the color of the crop frame border.

Thickness: Configure the thickness of the crop frame either with the slider or by directly entering a value.

・Crop frame simultaneous settings

1. Click and select multiple crop frames.

   When doing this, the Crop Setting area will look like the picture below.



2. Configuring each item in the Crop Setting area will reflect those settings in all selected crop frames *Items other than Target Face can be set.

*While the Layer Properties can be changed after configuring the Crop settings, if you are going to change the Layout, all settings made in the Crop Setting area will be reset to factory settings.

■ AI Face Crop limitations

There are a number of limitations when performing a PGM selection of AI layers, including AI Face Crop.

Ensure that you understand the limitations before using.

For details, refer to “AI Layer Limitations”.

Configure the Face Database Settings

The face database settings are used for the AI-based facial recognition of subjects detected in the camera footage.
By setting AI Effect Filter or AI Face Crop in one of the layers constituting the scene (composite video), you can control the facial recognition for detected subjects.

■ Limitations when registering faces in the face database

Registering faces in the face database has the following limitations.

- The face of the subject being registered must be larger than 50 x 50 pixels.
- If the image of the subject to be registered is directly facing the camera, it will be easier for the accuracy of facial recognition to improve.

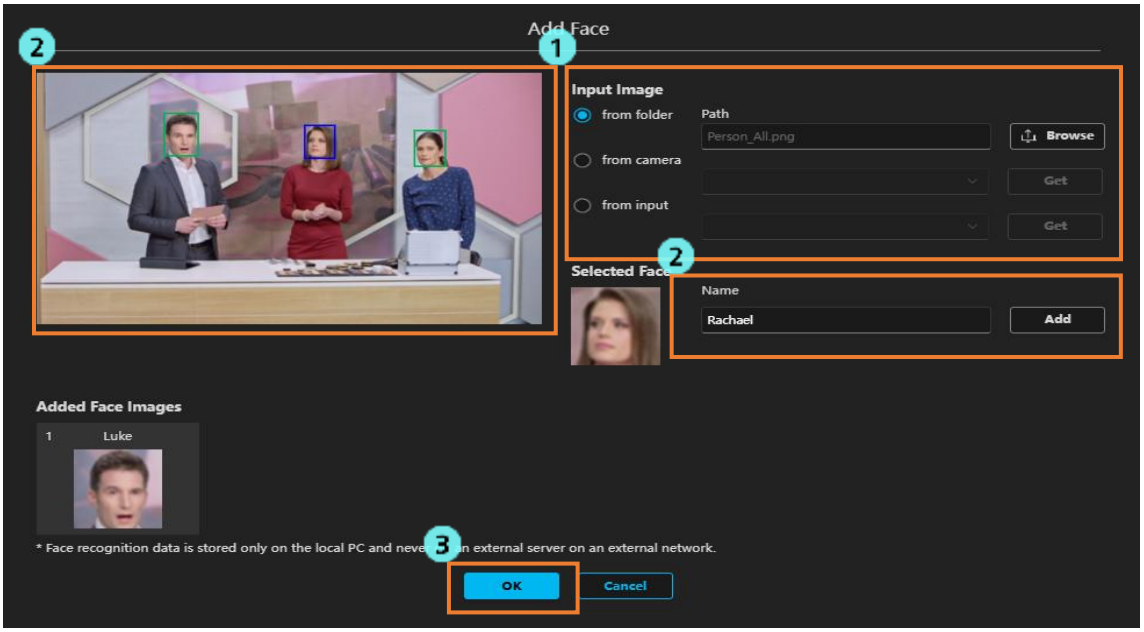
■ Face database registration procedure

* For details on this procedure, also refer to "Managing a Scene (Composite Video)".

1. Select the image showing the subject whose face you want to register.
   Select one of the following radio buttons to proceed.
   - from folder: Register a face using a JPEG or PNG image showing the face.
     Click the Browse button to display the file selection screen, and then select the image you want to use.
   - from camera: Register a face using the image the camera is showing.
     Only cameras registered with PTZ Control will be displayed in the list box, so select the camera you want and click the Get button.
   - from input: Register a face using the Input image from this plugin.
     Only Inputs with Reception set to ON will be displayed in the list box, so select the Input you want and click the Get button.
2. Select the face you want to register in the face database.
   After completing procedure 1, a rectangle will be shown around each face, so select the people you want to register in the face database. Selecting a rectangle will display the image of the Selected Face.
   Enter a name for the Selected Face text box.
   You can register multiple people at once.
3. Register in the face database.
   Click the Add button to register the face with the face database.

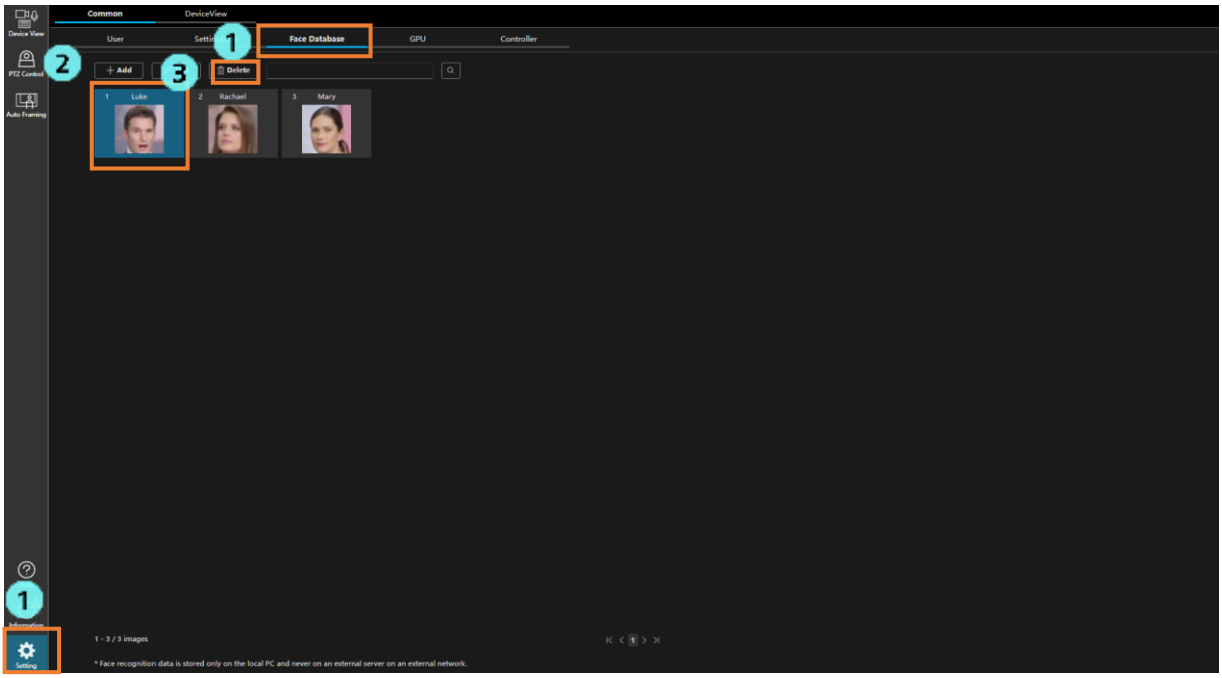
＜Notes＞

- Do not register multiple images of the same person in the face database.
  Since each image is recognized as a different person, there is a possibility of malfunction.



■ Procedure to delete data from face database

1. Click the Face Database tab from the Setting screen.
2. Select the face data that you want to delete.
3. Click the Delete button to delete from the face database.



AI Layer Limitations

AI layers cannot process multiple inputs simultaneously.

Ensure that you understand the following limitations before using.

■ Limitations when previewing a Scene with AI layers

・When previewing a Scene with an AI layer while another Scene with an AI layer is PGM-selected, the preview video will not have the AI layer effect applied. (*)

*: This is based on a limitation that does not allow AI layers to simultaneously process multiple inputs.

However, AI layers are enabled in the following cases.

Pattern 1: When the PGM-selected Scene and Preview-selected Scene both include an AI Keying layer, and AI Keying Input (cameras) and AI Keying Background (shooting position) are the same

Pattern 2: When the PGM selected Scene and Preview selected Scene both include an AI Face Crop layer, and the AI Face Crop Input (cameras) is the same.

■ Limitations when transitioning a Scene with AI layers

・When PGM-selecting a Scene with transitions and an AI layer set while another scene with an AI layer is PGM-selected, the transition effect will be forcibly set to CUT. (*)

*: This is based on a limitation that does not allow AI layers to simultaneously process multiple inputs.

However, transitions are enabled in the following cases.

Pattern 1: When the pre-transition scene and post-transition scene both include an AI Keying layer, and AI Keying Input (cameras) and AI Keying Background (shooting position) are the same

Pattern 2: When the pre-transition scene and post-transition scene both include AI Face Crop, and AI Face Crop Input (cameras) is the same.

■ Limitations when performing a PGM Out transition between Scenes that include AI Keying

・In the following case, camera movement will occur during the transition, which will cause image disruptions. (*)

- When the AI Keying Input (camera) is the same in the pre- and post-transition scene, but the AI Keying Background (shooting position) is different

*: We are planning to improve the quality of video during transition in future updates.

Configure the Multi View Settings

In each view of Multi View, video materials such as the input source and the output videos can be freely assigned.

The transition effect for switching videos is also set here.

■ Configure the layout of Multi View

The layout of Multi View can be selected from the following three types.

Multi View internally has 1 to 12 small views and two large views (A and B), and the number and arrangement of these views varies depending on the layout.

Even if the layout is changed, settings such as the video materials and output videos assigned to each view are retained.

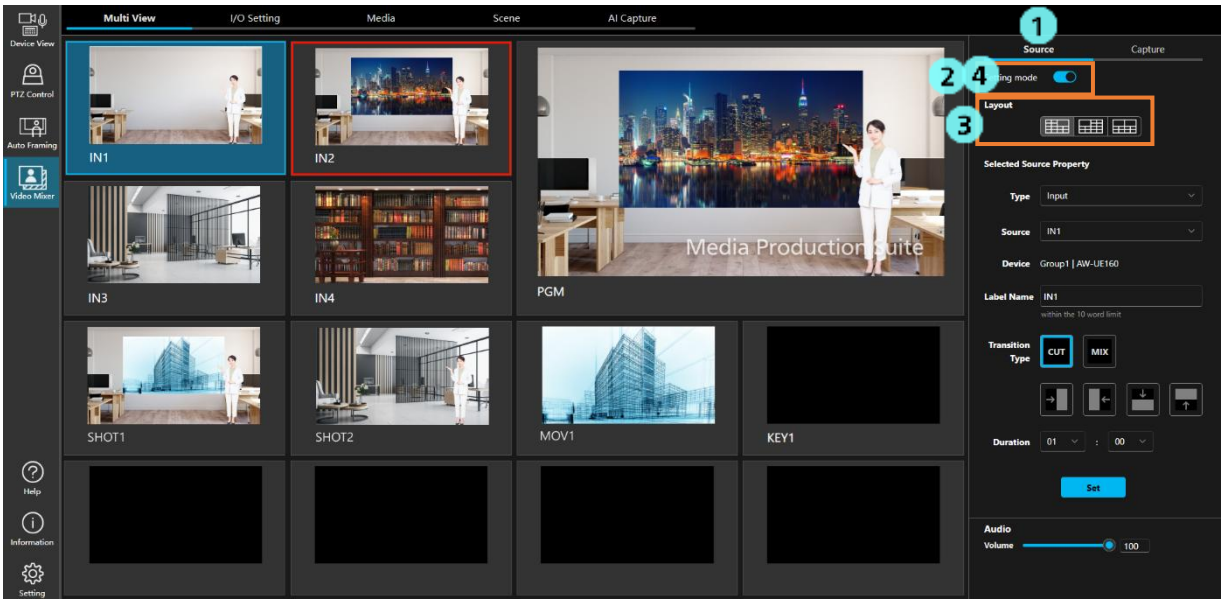
1	2	A	
3	4		
5	6	7	8
9	10	11	12

A		1	2
		3	4
5	6	7	8
9	10	11	12

A		B	
1	2	3	4
5	6	7	8

Configure the layout settings according to the procedure below.

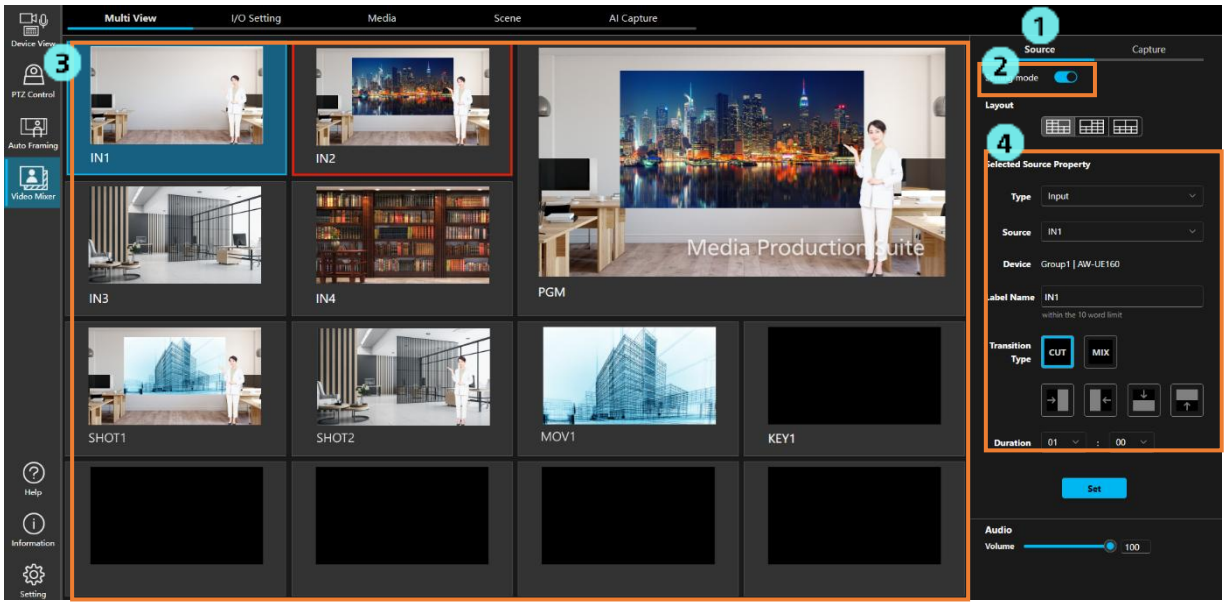
1. Open the Multi View screen and click the Source tab at the top right of the screen.
2. Turn ON the Setting Mode button.
3. Select a layout in the Layout field.
4. Turn OFF the Setting Mode button.



■ Configuring the settings for each view of Multi View

Assign video materials and output videos to each view according to the procedure below.

1. Open the Multi View screen and click the Source tab at the top right of the screen.
2. Turn ON the Setting Mode button.
3. In the view area, click and select the view for which you want to change the settings (turns blue).
4. In the Selected Source Property field, set the details to be displayed in the view and the transition effect.



4-1. In Type under Selected Source Property, set the type of the video assigned to the view.

You can select from the following. The settings will change according to the selected Type.

Input: Input source video

Movie: Video of the movie file registered on the Media screen

Image: Image of the still image file registered on the Media screen

Key: Either of the following Key videos

Fill or Source of the Key generated by AI Keying of the selected scene

Scene: Composite video of the scene registered on the Scene screen

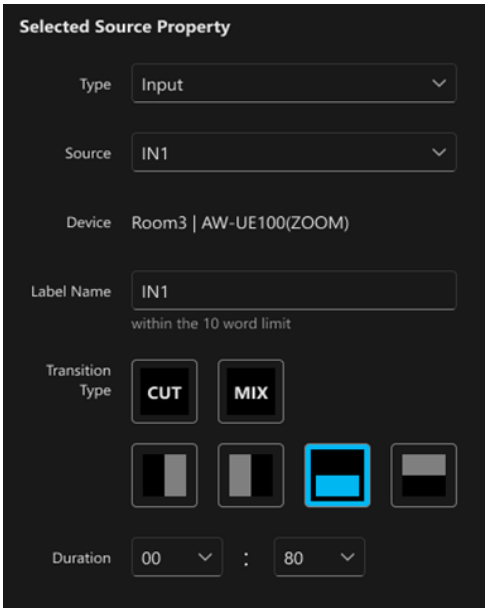
PGM Output: Video being output as PGM Out

PVW: Video of materials selected as Preview

INTSG：Colorbar output and 1KHz test sound output

None: No assignment (black image display)

When the Type is Input



Source: Assign the input source.

Device: This shows the name of the input source.

If the Device Type of the input source is a PTZ Camera, the group name and camera name on the software are displayed.

If the Device Type of the input source is Other, the device name set on the input source settings screen is displayed.

Label Name: This is the name displayed in view. Set it in 1 to 10 characters.

Characters available: Single-byte numbers, single-byte alphabets (upper case, lower case), single-byte space, single-byte symbols _ - ( )

Transition Type: From the following, select the video effect that will be used when switching to this view.

CUT: The scene switches immediately to another scene.

MIX: The scene gradually changes to the next scene.

WIPE (RIGHT): The scene is pushed from the left to the right and off the screen to be replaced by another.

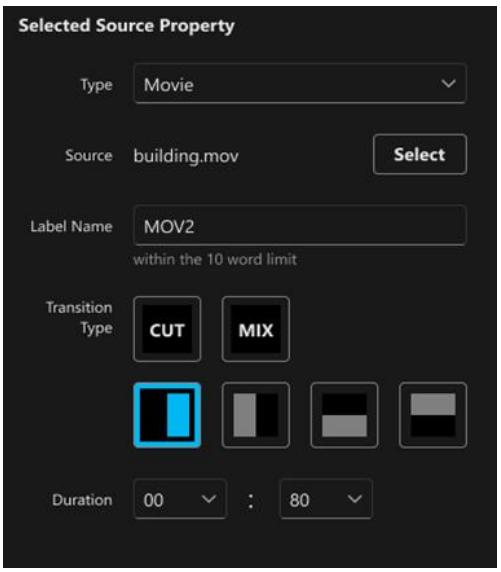
WIPE (LEFT): The scene is pushed from the right to the left and off the screen to be replaced by another.

WIPE (DOWN): The scene is pushed from the top to the bottom and off the screen to be replaced by another.

WIPE (TOP): The scene is pushed from the bottom to the top and off the screen to be replaced by another.

Duration: Set the duration of the video effect when the Transition Type is other than CUT.

When the Type is Movie



Source: Click the Select button to select the movie file you want to use.

The movie file must be registered in advance on the Media screen.

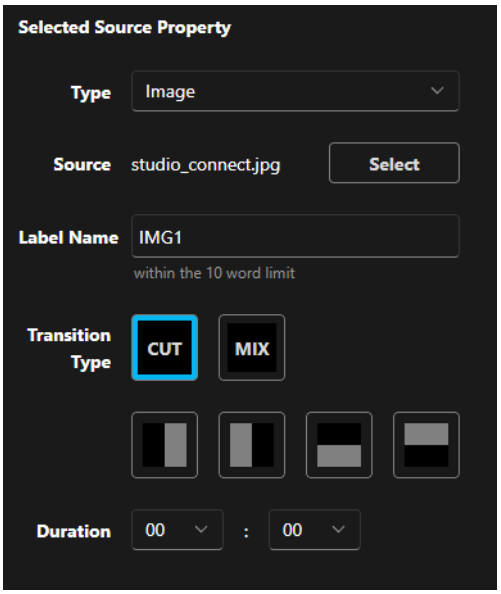
For details, refer to "Registering or Deleting a Movie or Still Image File".

Label Name: This is the name displayed in view. Set it in 1 to 10 characters.

Transition Type: Same as when the Type is Input.

Duration: Same as when the Type is Input.

When the Type is Image



Source: Click the Select button to select the still image file you want to use.

The still image file must be registered in advance on the Media screen.

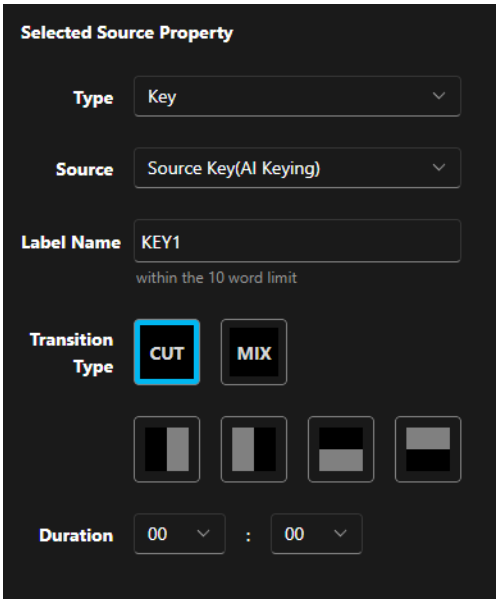
For details, refer to "Registering or Deleting a Movie or Still Image File".

Label Name: This is the name displayed in view. Set it in 1 to 10 characters.

Transition Type: Same as when the Type is Input.

Duration: Same as when the Type is Input.

When the Type is Key



Source: Select the type of the Key you want to output.

・Source Key (AI Keying)

This will output the Source of the Key generated by AI Keying of the selected scene.

・Fill Key (AI Keying)

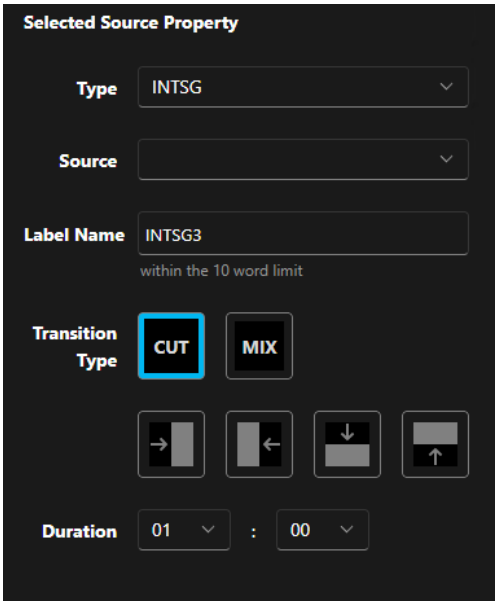
This will output the Fill of the Key generated by AI Keying of the selected scene.

Label Name: This is the name displayed in view. Set it in 1 to 10 characters.

Transition Type: Same as when the Type is Input.

Duration: Same as when the Type is Input.

When the Type is INTSG



Source：Select the type of Colorbar to output.

・Colorbar

Displays a still image of a SMPTE-compliant Colorbar.

・Colorbar(moving)

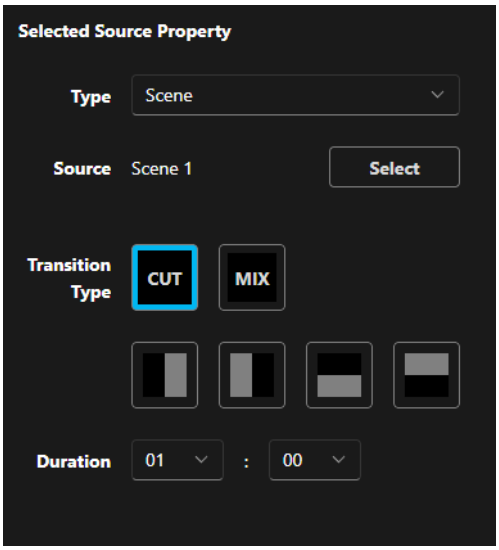
Displays a video that moves the Colorbar diagonally.

Label Name：This is the name displayed in view. Set it in 1 to 10 characters.

Transition Type：Same as when the Type is Input.

Duration：Same as when the Type is Input.

When the Type is Scene



Source: Click the Select button to select the scene (composite video) you want to use.

The scene must be registered in advance on the Scene screen.

For details, refer to "Managing a Scene (Composite Video)".

Transition Type: Same as when the Type is Input. *

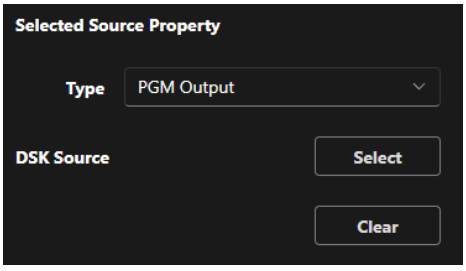
Duration: Same as when the Type is Input.

*Notes

When switching between Scenes that include AI Keying, the video effect may be forced to CUT.

For details, please refer to "Configure the AI Keying Settings"

When the Type is PGM Output



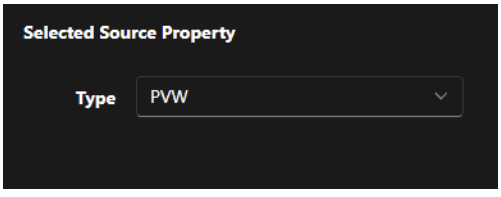
DSK Source: Click the Select button to select the still image file you want to use in DSK.

The still image file must be registered in advance on the Media screen.

For details, refer to "Registering or Deleting a Movie or Still Image File".

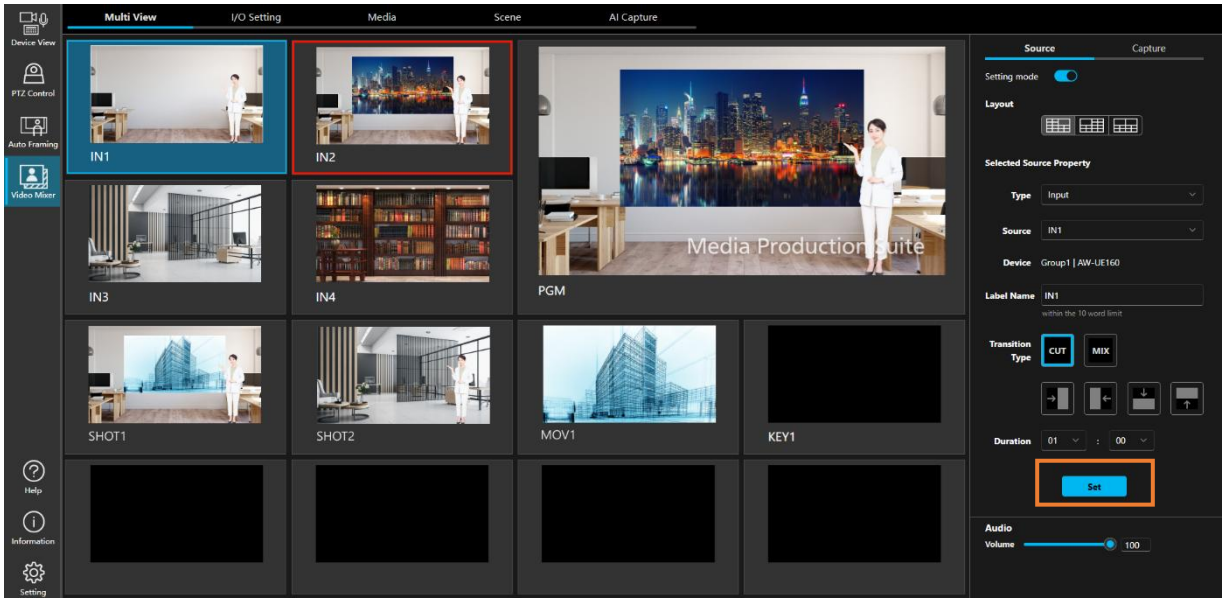
Click the Clear button to remove the DSK material you have set.

When the Type is PVW



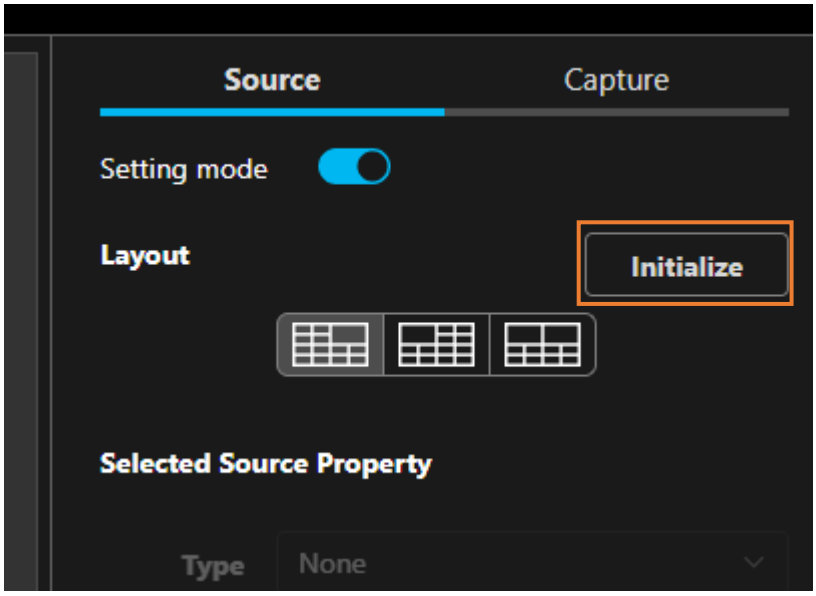
No particular setting.

4-2. If you click the Set button at the bottom of the Selected Source Property field, the view is assigned.



■Initialize the Multi View layout

You can initialize the Multi View by pressing the Initialize button.



The initial layout is as follows:

<table>
<tr><td>IN1</td><td>IN2</td><td colspan="2" rowspan="2">PGM</td></tr>
<tr><td>IN3</td><td>IN4</td></tr>
<tr><td>None</td><td>None</td><td>None</td><td>None</td></tr>
<tr><td>None</td><td>None</td><td>None</td><td>None</td></tr>
</table>

Outputting the Video

The procedure for outputting video materials assigned to each view of Multi View is described below.

■ About processing of video materials

To reduce the processing load on the PC, under normal conditions, playback and compositing of video materials other than the input sources (IN1 to IN4) are not performed. Playback and compositing are performed only when a video material is selected as a Preview or PGM Out target.

Therefore, movies are played only for the following views in Multi View.

- Type: Input view
- Type: Preview or Type: PGM Output view
- A view selected as the Preview or PGM Out target

■ Previewing video materials

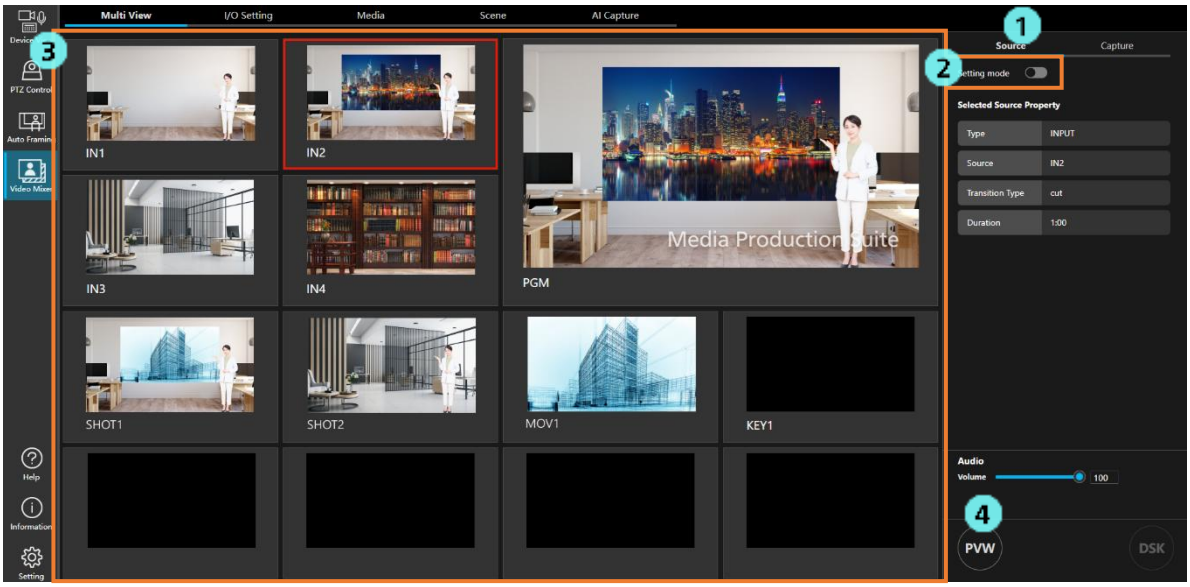
The contents of a video material can be previewed before selecting the video material as PGM Out.

Videos being previewed can be checked only for views selected as a Preview or a view in which the Type is set as PVW in Multi View.

Follow the procedure below to preview video materials.

1. Open the Multi View screen and click the Source tab at the top right of the screen.
2. Turn OFF the Setting Mode button.
3. Click the PVW button at the bottom right of the Multi View screen to turn it ON (turns blue).
4. If you click the view of the video material you want to preview, a movie will play for the video material for the selected view, and the contents can be checked.

   Green frames indicate the view is previewed.



■ Outputting a video material as PGM Out

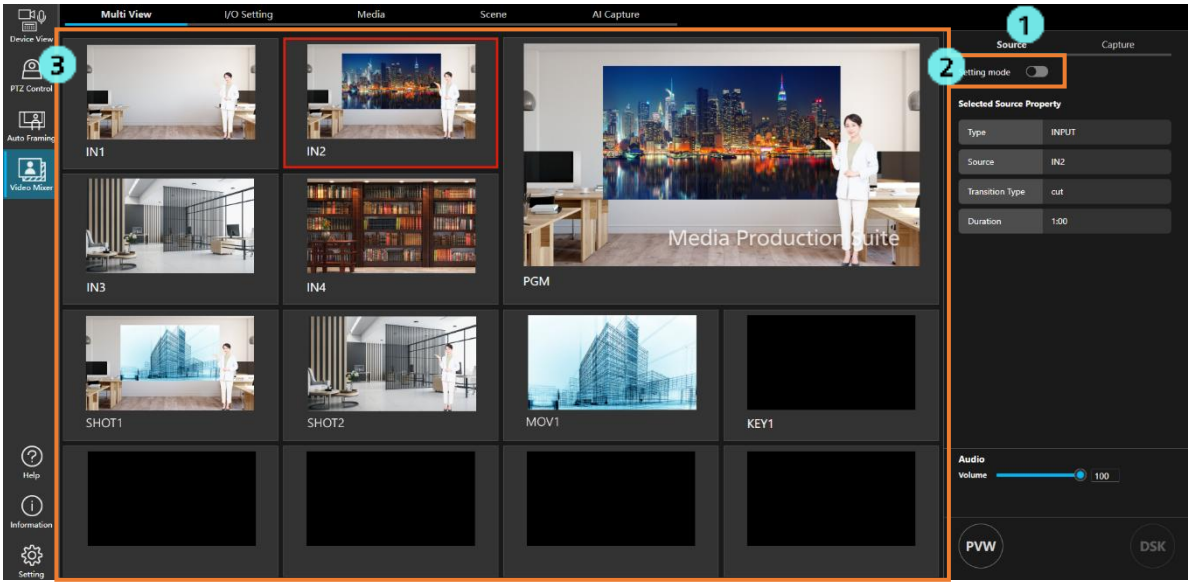
If you select a video material as PGM Out, playback or compositing of the selected video material is performed, and the video is output to the following output destinations.

- The output destination for which Type is set to PGM + DSK or PGM in “Configure the Output Type Settings”
- The view for which Type is set to PGM Output in Multi View

Follow the procedure below to select a video material as PGM Out.

1. Open the Multi View screen and click the Source tab at the top right of the screen.
2. Turn OFF the Setting Mode button.
3. If you click the view of the video material you want to output as PGM Out, the video material is selected as an output target of PGM Out.

   Red frames indicate the view is output as PGM Out.



Configure and run a DSK

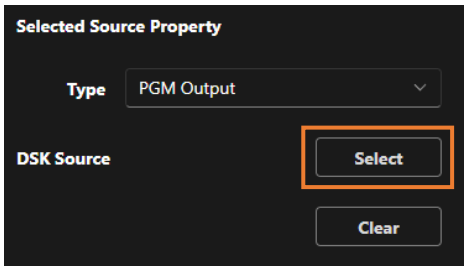
You can superimpose subtitles and logos as DSK on a video being output as PGM Out.

The still image file used as DSK material must be registered in advance on the Media screen.
For details, refer to “Registering or Deleting a Movie or Still Image File”.

■ Configuring a DSK

Follow the procedure below to configure a DSK.

1. On the IO Setting screen, set the output type as PGM + DSK.
   For details, refer to “Configure the Output Type Settings”.
2. On the Multi View screen, set any one of the views to Type: PGM Output.
   For details, refer to “Configure the Multi View Settings”.
3. Click the Select button for DSK Source, which is displayed in the Selected Source Property area of the view set to PGM Output. A list of registered still image files will be displayed, so select the still image file you want to use with DSK.

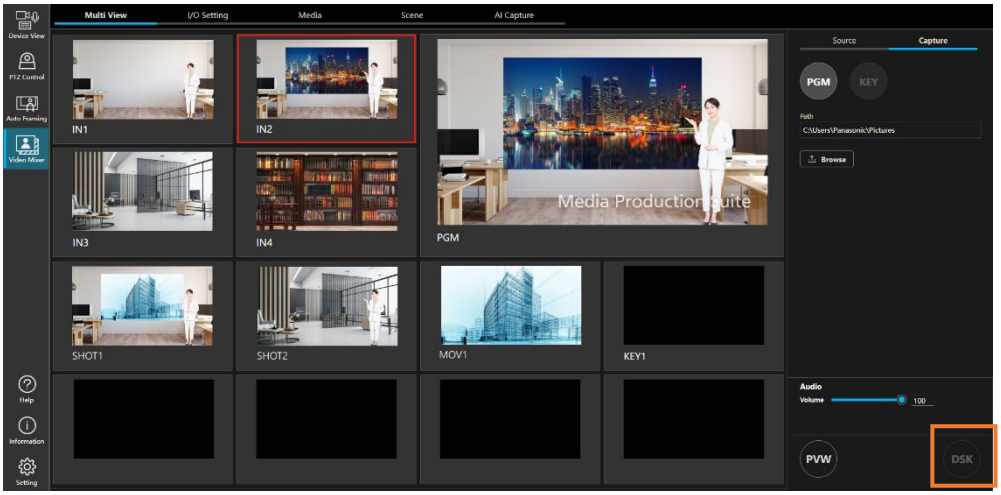


■ Run a DSK

Follow the procedure below to run a DSK.

1. On the Multi View screen, output any one of the views as PGM Out.
2. Click the DSK button at the bottom right of the Multi View screen to turn it ON (turns blue).
   -> The DSK is superimposed on the video being output as PGM Out.

   If you again click the DSK button to turn it OFF (turns black), the DSK is erased.

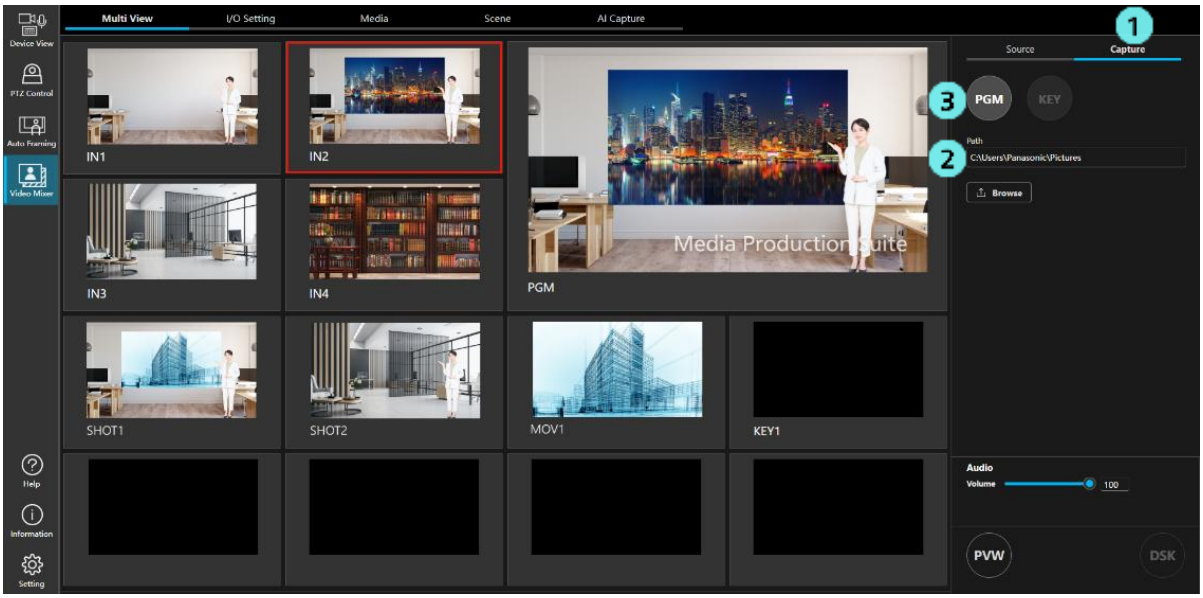


Capturing a Video

The video or Key signal of a video material being output as PGM Out can be captured as a PNG image.

Follow the procedure below to capture a video material as a PNG image.

1. Open the Multi View screen and click the Capture tab at the top right of the screen.
2. Set the path of the output destination.
3. If you click the PGM button, the video of the video material being output as PGM Out will be output as a PNG image of RGB 24bit.
   If you click the KEY button, the Key signal of the video material being output as PGM Out will be output as a PNG image of RGBA 32bit.



＜Note＞

Please set the capture output path to the path of the PC where MPS is installed.

If you set a path on the client PC, the capture will fail.

Function Restrictions by Role

List of Function Restrictions by Role

Roles other than Administrator (i.e. Super User and User accounts) are subject to restrictions on the functions available for use.

Functions indicated with a circle (○) in the table below are available for use.

		Administrator	Super User	User
Multi View screen	Video switching (PGM Out is selected)	○	○	○
	Video preview	○	○	○
	DSK output ON/OFF	○	○	○
	Multi view layout settings	○	○	
	View settings	○	○	
	Capture output path settings	○	○	
	PGM capture	○	○	○
	KEY capture	○	○	○
	Output audio volume adjustment	○*	○*	○*
IO Setting screen	Video Mixer Enable settings	○	○	
	Input source settings	○	○	
	System format settings	○	○	
	Output audio on/off	○	○	
	Output settings	○	○	
	Line out settings	○*	○*	
Media screen	Movie/still image file registration	○	○	
	Movie/still image file deletion	○	○	
Scene screen	Scene registration	○	○	
	Scene editing	○	○	
	Scene deletion	○	○	
AI Capture screen	AI Keying Background image capture	○	○	
	Pan, Tilt, and Zoom operation of the PTZ camera	○	○	
	Pan/Tilt limitation settings of the PTZ camera	○	○	
	Focus/Iris operation of the PTZ camera	○	○	
	Gain, WB, Shutter, ND settings of the PTZ camera	○	○	

*: ○ only when output audio is enabled